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SESSION RESUMED IN FILE 'CAPLUS' AT 14:18:05 ON 01 AUG 2005  
FILE 'CAPLUS' ENTERED AT 14:18:05 ON 01 AUG 2005  
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	1.80	1720.03
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-148.92

=> d his

(FILE 'HOME' ENTERED AT 10:54:06 ON 01 AUG 2005)

FILE 'REGISTRY' ENTERED AT 10:54:19 ON 01 AUG 2005

SET PLUR ON PERM

SET ABBR ON PERM

E ZINC OXIDE/CN

L1 1 S E3  
L2 SCREEN 2021  
L3 STRUCTURE UPLOADED  
L4 QUE L3 AND L2  
L5 STRUCTURE UPLOADED  
L6 STRUCTURE UPLOADED  
L7 50 S L6  
L8 6992270 S S>0  
L9 153842 S L6 FULL SSS  
L10 71173 S L9 AND S>0  
SAVE TEMP STRIAZ/A L10

FILE 'CAPLUS' ENTERED AT 12:02:58 ON 01 AUG 2005

E US2004-812127/APPS

L11 1 S E3  
SEL RN L11

FILE 'REGISTRY' ENTERED AT 12:05:39 ON 01 AUG 2005

L12 7 S E1-E7  
E 1,3,5-TRIAZINE-2,4-DIAMINE, N-(1,1-DIMETHYLETHYL)-N/CN  
L13 1 S E25  
L14 STRUCTURE UPLOADED  
L15 STRUCTURE UPLOADED  
L16 STRUCTURE UPLOADED  
L17 STRUCTURE UPLOADED  
E ZINC PYRITHION/CN  
L18 1 S E4

FILE 'CAPLUS' ENTERED AT 12:25:58 ON 01 AUG 2005

FILE 'REGISTRY' ENTERED AT 12:27:37 ON 01 AUG 2005

L19 50 S L14  
L20 4216 S L14 FULL SSS

L21            50 S L15  
L22           7981 S L15 FULL SSS  
L23            2 S L16  
L24           55 S L16 FULL SSS  
L25           597 S L17 FULL SSS

FILE 'CAPLUS' ENTERED AT 12:32:58 ON 01 AUG 2005

L26           16 S L10 AND L20 AND L1  
L27            2 S L13 AND L18 AND L1  
L28           23 S L22 AND (L24 OR L25) AND L10  
L29           47 S L10 AND L20 AND (L22 OR L24 OR L25)  
L30           14 S L10 AND L20 AND L22 AND (L24 OR L25)

FILE 'REGISTRY' ENTERED AT 13:56:05 ON 01 AUG 2005

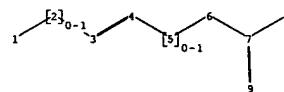
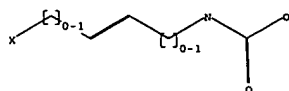
SAVE TEMP L20 PYR/A  
SAVE TEMP L22 ISOTHIA/A  
SAVE TEMP L24 CARBAMATE1/A  
SAVE TEMP L25 CARBAMATE2/A  
SAVE TEMP L13 ETTBTTRI/A  
SAVE TEMP L18 ZINCP/A  
SAVE TEMP L1 ZNO/A

FILE 'CAPLUS' ENTERED AT 14:14:36 ON 01 AUG 2005

SAVE TEMP L26 JADL26/A  
SAVE TEMP L27 JADL27/A  
SAVE TEMP L28 JADL28/A  
SAVE TEMP L29 JADL29/A  
SAVE TEMP L30 JADL30/A

=> d 127 1-2 ibib abs total hitst

L24



chain nodes :

1 2 3 4 5 6 7 8 9

chain bonds :

1-2 2-3 3-4 4-5 5-6 6-7 7-8 7-9

exact/norm bonds :

5-6 6-7 7-8 7-9

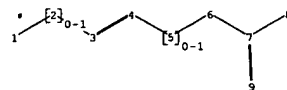
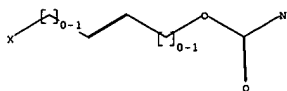
exact bonds :

1-2 2-3 3-4 4-5

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS  
9:CLASS

L25



chain nodes :

1 2 3 4 5 6 7 8 9

chain bonds :

1-2 2-3 3-4 4-5 5-6 6-7 7-8 7-9

exact/norm bonds :

5-6 6-7 7-8 7-9

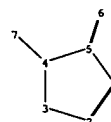
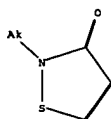
exact bonds :

1-2 2-3 3-4 4-5

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS  
9:CLASS

L22



chain nodes :

6 7

ring nodes :

1 2 3 4 5

chain bonds :

4-7 5-6

ring bonds :

1-2 1-5 2-3 3-4 4-5

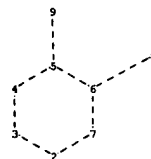
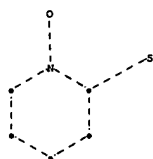
exact/norm bonds :

1-2 1-5 2-3 3-4 4-5 4-7 5-6

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS

L20



ring nodes :

2 3 4 5 6 7

ring/chain nodes :

8 9

ring/chain bonds :

5-9 6-8

ring bonds :

2-3 2-7 3-4 4-5 5-6 6-7

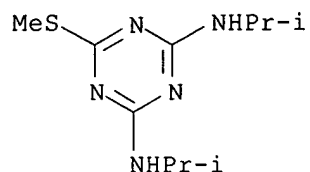
exact/norm bonds :

2-3 2-7 3-4 4-5 5-6 5-9 6-7 6-8

G1:H,Ak,Cy

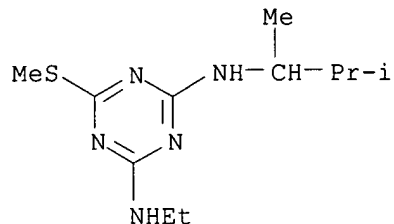
Match level :

2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:CLASS 9:CLASS



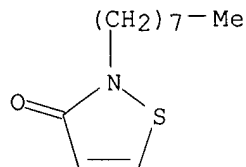
RN 22936-75-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-(1,2-dimethylpropyl)-N'-ethyl-6-(methylthio)-  
(9CI) (CA INDEX NAME)



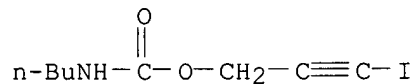
RN 26530-20-1 CAPLUS

CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS

CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



=> d 129 1-47 ibib abs total hitstr

L29 ANSWER 1 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:471844 CAPLUS

DOCUMENT NUMBER: 143:28318

TITLE: Micronized wood preservative formulations  
 INVENTOR(S): Leach, Robert M.; Zhang, Jun  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S.  
 Ser. No. 821,326.  
 CODEN: USXXCO

DOCUMENT TYPE: Patent  
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005118280	A1	20050602	US 2004-970446	20041021
US 2004258767	A1	20041223	US 2004-821326	20040409
PRIORITY APPLN. INFO.:			US 2003-461547P	P 20030409
			US 2003-518994P	P 20031111
			US 2004-821326	A2 20040409
			US 2004-568485P	P 20040506

AB The wood preservative compns. comprising micronized particles. The composition comprises dispersions of micronized metal or metal compds. The wood preservative composition comprises an inorg. component comprising a metal or metal compound and organic biocide. When the composition comprises an inorg. component and an organic biocide, the inorg. component or the organic biocide

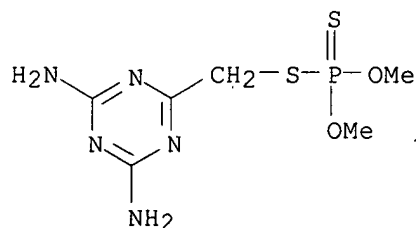
or both are present as micronized particles. When used for preservation of wood, the micronized particles can be observed as uniformly distributed within the wood and there is minimal leaching of the metal and biocide from the wood.

IT 78-57-9, Menazon 2682-20-4 3696-28-4,  
 Dipyrrithione 14915-37-8, Copper omadine 26172-55-4  
 26530-20-1 55406-53-6 55965-84-9, Kathon WT  
 64359-81-5

RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
 (micronized wood preservative formulations comprising inorg. metal compds. and organic biocides)

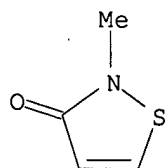
RN 78-57-9 CAPLUS

CN Phosphorodithioic acid, S-[(4,6-diamino-1,3,5-triazin-2-yl)methyl]  
 O,O-dimethyl ester (9CI) (CA INDEX NAME)



RN 2682-20-4 CAPLUS

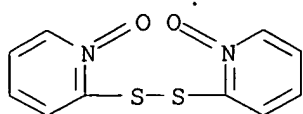
CN 3(2H)-Isothiazolone, 2-methyl- (9CI) (CA INDEX NAME)



RN 3696-28-4 CAPLUS

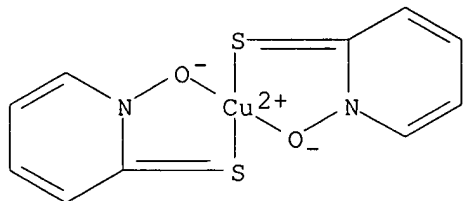


CN Pyridine, 2,2'-dithiobis-, 1,1'-dioxide (9CI) (CA INDEX NAME)



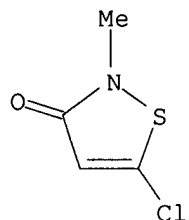
RN 14915-37-8 CAPLUS

CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
(CA INDEX NAME)



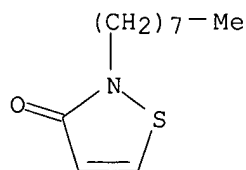
RN 26172-55-4 CAPLUS

CN 3(2H)-Isothiazolone, 5-chloro-2-methyl- (9CI) (CA INDEX NAME)



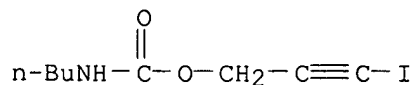
RN 26530-20-1 CAPLUS

CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS

CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



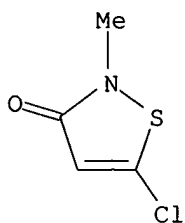
RN 55965-84-9 CAPLUS

CN 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-  
isothiazolone (9CI) (CA INDEX NAME)

CM 1

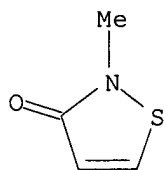
CRN 26172-55-4

CMF C4 H4 Cl N O S

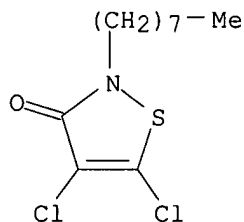


CM 2

CRN 2682-20-4  
CMF C4 H5 N O S



RN 64359-81-5 CAPLUS  
CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)

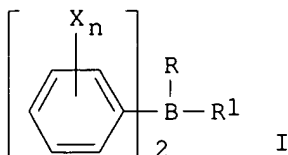


L29 ANSWER 2 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2005:141177 CAPLUS  
DOCUMENT NUMBER: 142:221334  
TITLE: Environment friendly antifouling coating compositions  
with good exfoliation and wear resistance for  
underwater structures  
INVENTOR(S): Masuoka, Shigeru; Yamashita, Hiroshi; Kawamura,  
Yasushi  
PATENT ASSIGNEE(S): NOF Kansai Marine Coatings Co., Ltd., Japan  
SOURCE: PCT Int. Appl., 77 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005014737	A1	20050217	WO 2004-JP9554	20040706
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK,				

LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO,  
 NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,  
 TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
 SN, TD, TG

JP 2005060510 A2 20050310 JP 2003-291951 20030812  
 PRIORITY APPLN. INFO.: JP 2003-291951 A 20030812  
 OTHER SOURCE(S): MARPAT 142:221334  
 GI



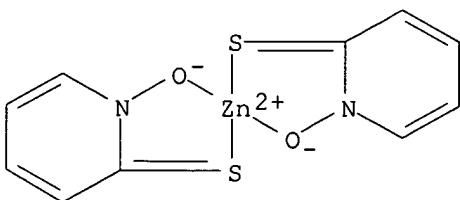
AB Title coating compns. applicable even to aluminum boats showing long-term antifouling properties comprise a component I and a polymerizable unsatd. metal salt compound-derived compound  $R_5(CH_2)_pCOOMLq$ , wherein R = C1-8 alkyl or alkoxy, C2-8 alkenyl or alkynyl, hydroxy, or halogen atom; R1 = halogen-substituted 5,6,7,8-tetrahydroquinoline, substituted pyridine, isoquinoline,  $NH_2R_2$ , or  $NH_2R_3OR_4$ ; R2, R4 = C1-24 linear alkyl or C3-24 branched alkyl; R3 = C1-24 linear alkyl or C3-24 branched alkyl, or phenylene; R5 =  $CH_2:C(CH_3)$ ,  $CH_2:CH$ ,  $HOOCCH:CH$ , or  $HOOCCH:C(CH_3)$ ; X = halogen atom, C1-8 alkyl or alkoxy; L = organic acid residue; M = metal atom; n = 0-3 integer; p = 0-2 integer; and q = atomic valence of metal -1. Thus, zinc acrylate 14, zinc acrylate oleate 26, Me methacrylate 15, and Et acrylate 45 parts were polymerized to give a 40%-solids copolymer solution with Mw 8000, 500 parts of which was mixed with methyldiphenylpyridineboron 100, cyanine blue 4.0, zinc chloride 12.0, Disparlon A 630-20XN 2.5, Disparlon 4200-20 2.0, xylene 14.5, and propylene glycol monomethyl ether 5.0 to give a coating composition with good antifouling, adhesion, crack and wear resistance, and recoatability.

IT 13463-41-7, 2-Pyridinethiol-1-oxide zinc salt 28159-98-0  
 154592-20-8

RL: MOA (Modifier or additive use); USES (Uses)  
 (antifouling agent; environment friendly antifouling coating compns.  
 with good exfoliation and wear resistance for underwater structures)

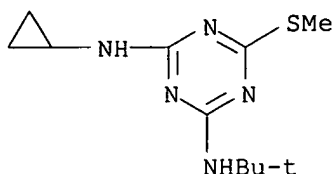
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy- $\kappa$ O)-2(1H)-pyridinethionato- $\kappa$ S2]-, (T-4)-  
 (9CI) (CA INDEX NAME)

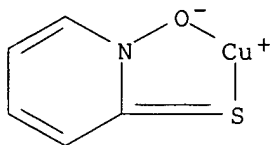


RN 28159-98-0 CAPLUS

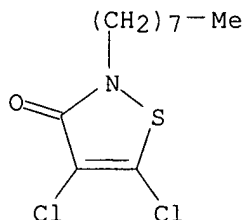
CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



IT 64359-81-5  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (environment friendly antifouling coating compns. with good exfoliation  
 and wear resistance for underwater structures)  
 RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 3 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1072090 CAPLUS

DOCUMENT NUMBER: 142:87880

TITLE: Toxic effects of alternative antifouling biocides on  
 marine zooplankton and phytoplankton

AUTHOR(S): Mieno, Hirohisa; Okamura, Hideo; Tsunemasa, Noritaka

CORPORATE SOURCE: Fac. Maritime Sci., Kobe Univ., Kobe, 658-0022, Japan

SOURCE: Yosui to Haisui (2004), 46(12), 1031-1036

CODEN: YOHAAP; ISSN: 0513-5907

PUBLISHER: Sangyo Yosui Chosakai

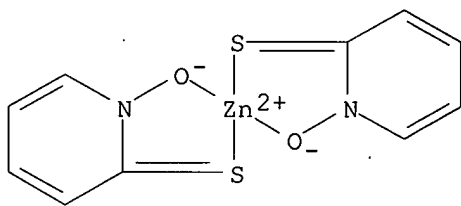
DOCUMENT TYPE: Journal

LANGUAGE: Japanese

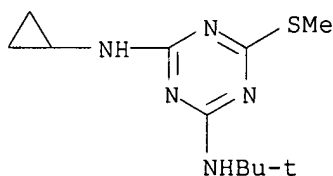
AB The toxic effects of antifouling biocides as alternatives of TBT, TBTO and  
 the like on marine zooplankton and phytoplankton were assessed; the used  
 biocides were Irgarol 1051, Diuron, Sea-Nine 211, Zinc pyrithione, Copper  
 pyrithione, Tri-Ph borane pyridine (KH101). Zinc di-Me dithiocarbamate  
 and N-(2,4,6-trichlorophenyl)maleimide (TCPM); in addition, Cu2+, Cr6+, Zn2+,  
 Cd2+ and DMSO were examd; the used phytoplankton were Skeletonema costatum  
 (NIES-323) and the used zooplankton were Artemia saline. The bioassay  
 examination for the phytoplankton were performed based on the ISO 10253 (1995)  
 method; for the zooplankton, Artoxkit M (Microbiotest cooperation) with a  
 microplate was used. Values of NOEC and 72-h EC50 for S. costatum, and

48-h LC10 and 48-h LC50 for A. salina were determined for each of the biocides, and metals also. The values of 72-h EC50 were 0.85-21 µg/L; the ones of 48-h LC50 were 28-7400 µg/L. The biocides showed higher sensitivities than the metals. The risk assessment in the maline environment also was tried based on the obtained data and published data for the highest concns. of the residual biocides in maline water (HCRB) in refs.; the assessment were relied on risk coeffs. determined in an equation: risk coefficient = (HCRB)/(NOEC or LOEC). The values of NOEC and LOEC were discussed of many countries.

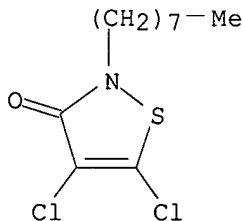
IT 13463-41-7, Zinc pyrithione 28159-98-0, Irgarol 1051  
 64359-81-5, Sea-nine 211 154592-20-8, Copper pyrithione  
 RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)  
 (toxic effects of alternative antifouling biocides on marine zooplankton and phytoplankton)  
 RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



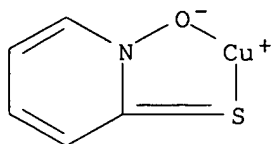
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



L29 ANSWER 4 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:995875 CAPLUS

DOCUMENT NUMBER: 141:407238

TITLE: Synergistic antimicrobial composition containing terbutryn or cybutryn

INVENTOR(S): Izquierdo, Ramis Amaro; Seguer, Bonaventura Joan

PATENT ASSIGNEE(S): Laboratorios Miret S.A., Spain

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004098289	A1	20041118	WO 2003-EP4769	20030507
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: WO 2003-EP4769 20030507

AB. Comps. are given comprising a first component selected from terbutryn and cybutryn and at least one second component selected from chlorothalonil, 2-octyl-2H-isothiazol-3-one and 4,5-dichloro-2-octyl-2H-isothiazol-3-one. Optional third components are 3-iodo-2-propynyl butylcarbamate or zinc 2-pyridinethiol 1-oxide. These comps. show a synergistic antimicrobial activity.

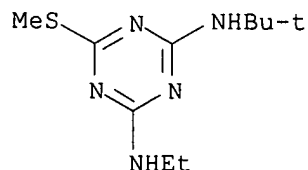
IT **886-50-0D**, Terbutryn, mixts. containing **13463-41-7D**, Zinc 2-pyridinethiol 1-oxide, mixts. containing **28159-98-0D**, Cybutrin, mixts. containing **55406-53-6D**, 3-Iodo-2-propynyl butylcarbamate, mixts. containing **791809-71-7**, Terbutryn-chlorothalonil mixture **791809-73-9 791809-74-0**

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

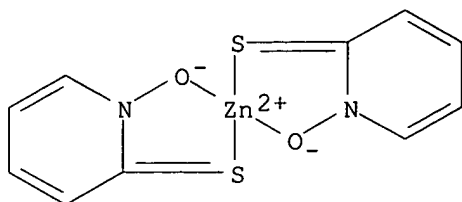
(synergistic antimicrobial comps.)

RN 886-50-0 CAPLUS

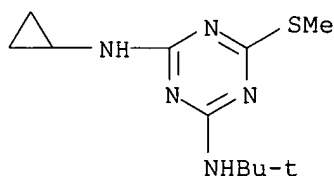
CN 1,3,5-Triazine-2,4-diamine, N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-(9CI) (CA INDEX NAME)



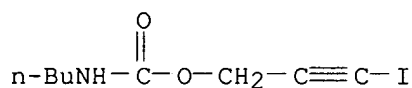
RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



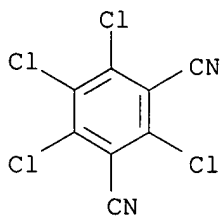
RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 791809-71-7 CAPLUS  
 CN 1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-, mixt. with  
 N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-1,3,5-triazine-2,4-diamine  
 (9CI) (CA INDEX NAME)

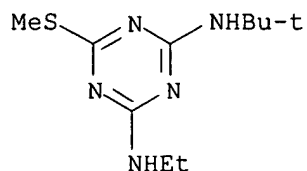
CM 1

CRN 1897-45-6  
 CMF C8 C14 N2



CM 2

CRN 886-50-0  
 CMF C10 H19 N5 S



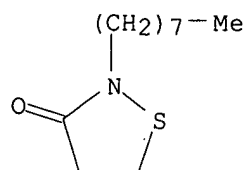
RN 791809-73-9 CAPLUS

CN 3-Isothiazolidinone, 2-octyl-, mixt. with N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 107391-79-7

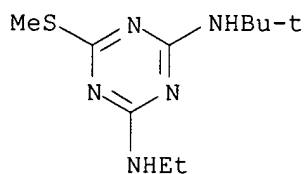
CMF C11 H21 N O S



CM 2

CRN 886-50-0

CMF C10 H19 N5 S



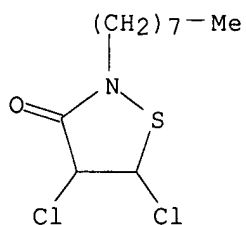
RN 791809-74-0 CAPLUS

CN 3-Isothiazolidinone, 4,5-dichloro-2-octyl-, mixt. with N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 704907-04-0

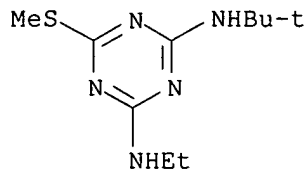
CMF C11 H19 Cl2 N O S



CM 2



CRN 886-50-0  
CMF C10 H19 N5 S



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 5 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:825127 CAPLUS  
DOCUMENT NUMBER: 141:320091  
TITLE: Microbicidal composition  
INVENTOR(S): Heer, Beat; Tiedtke, Gerhard; Hegarty, Bryan Martin  
PATENT ASSIGNEE(S): Switz.  
SOURCE: U.S. Pat. Appl. Publ., 4 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004198713	A1	20041007	US 2004-811518	20040329
JP 2004315507	A2	20041111	JP 2004-82164	20040322
BR 2004000787	A	20050628	BR 2004-787	20040326
EP 1466526	A2	20041013	EP 2004-251945	20040401
EP 1466526	A3	20041124		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

CN 1535581	A	20041013	CN 2004-10033347	20040402
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PRIORITY APPLN. INFO.: US 2003-460925P P 20030407

OTHER SOURCE(S): MARPAT 141:320091

AB A microbicidal composition containing (a) at least one sulfur-containing s-triazine,

(b) at least one pyrithione metal salt, and (c) at least one addnl. microbicide selected from 2-alkyl-4-isothiazolin-3-ones and halopropynyl carbamates is disclosed.

IT 886-50-0 13463-41-7, Zinc pyrithione 26530-20-1

28159-98-0 64359-81-5 129348-50-1

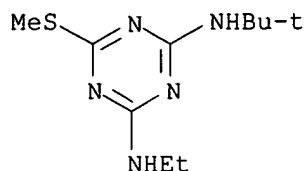
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(microbicidal composition containing an s-triazine, a pyrithione metal salt, and

an alkylisothiazolinone or halopropynyl carbamate)

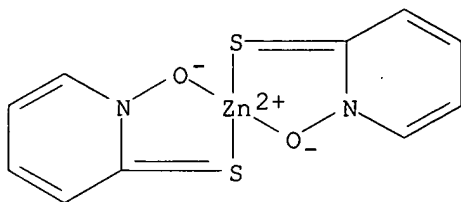
RN 886-50-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-(9CI) (CA INDEX NAME)



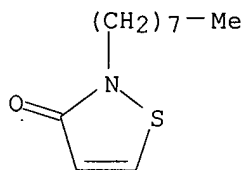
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



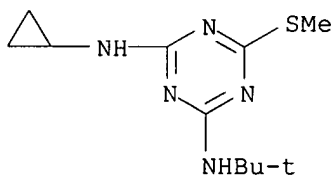
RN 26530-20-1 CAPLUS

CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



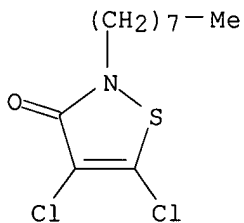
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



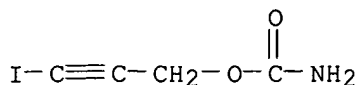
RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)

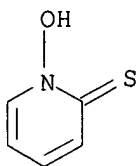


RN 129348-50-1 CAPLUS

CN 2-Propyn-1-ol, 3-iodo-, carbamate (9CI) (CA INDEX NAME)



IT 1121-30-8D, Pyrithione, derivs.  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (microbicidal composition containing an s-triazine, a pyrithione metal salt, and  
 an alkyliothiazolinone or halopropynyl carbamate)  
 RN 1121-30-8 CAPLUS  
 CN 2(1H)-Pyridinethione, 1-hydroxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L29 ANSWER 6 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:610054 CAPLUS  
 DOCUMENT NUMBER: 141:162353  
 TITLE: Transdermal patch comprising antiviral and other agents  
 INVENTOR(S): Rolf, David  
 PATENT ASSIGNEE(S): Lectec Corporation, USA  
 SOURCE: PCT Int. Appl., 144 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004062600	A2	20040729	WO 2004-US392	20040108
WO 2004062600	A3	20041104		

W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GH, GH, GM, HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ

PRIORITY APPLN. INFO.: US 2003-338809 A 20030108

AB An adhesive patch is provided wherein the patch includes a porous backing having a front side and a back side. The patch also includes a therapeutic formulation located on the front side of the backing. The backing includes a flexible sheet of water insol. porous material. The therapeutic formulation includes a combination of an antiviral agent useful for treating a viral infection in a mammal, e.g., human, a medicament that relieves topical discomfort, an adhesive, and a solvent. The solvent can preferably include a fragrance. The composition further comprises an antimicrobial, analgesic, anesthetic, and antipruritic agents. For example, a therapeutic formulation for adhesive patches contained (by weight) adhesives 10.00, Aloe vera, 10X 0.50%, menthol 0.50%, vaseline fragrance 2.00%, glycerin 44.27%, karaya gum 26.90%, benzocaine 5.00%, acyclovir 2.00%, triethylene glycol 5.00%, Quat-15 0.03%, vitamin E acetate 0.30%, and water 3.50%.

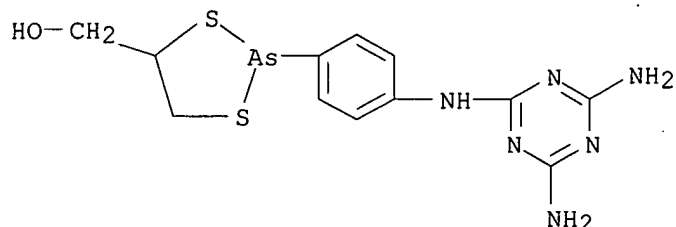
IT 494-79-1, Melarsoprol 1121-31-9D, amines

26530-20-1D, mixts. with benzimidazole derivs.

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(transdermal patch comprising antiviral and other agents)

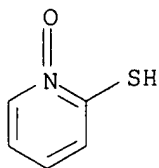
RN 494-79-1 CAPLUS

CN 1,3,2-Dithiarsolane-4-methanol, 2-[4-[(4,6-diamino-1,3,5-triazin-2-yl)amino]phenyl]- (9CI) (CA INDEX NAME)



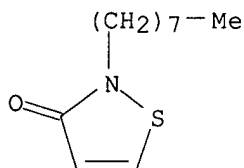
RN 1121-31-9 CAPLUS

CN 2-Pyridinethiol, 1-oxide (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 26530-20-1 CAPLUS

CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 7 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:371017 CAPLUS

DOCUMENT NUMBER: 140:359036

TITLE: Antifouling coating composition, antifouling coating films, and ships, underwater structures, fishing gear and fishing nets covered therewith

INVENTOR(S): Okimoto, Hiroyuki; Mukunoki, Yasuo; Ashida, Toshihiko; Ono, Masashi

PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan

SOURCE: PCT Int. Appl., 71 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004037932	A1	20040506	WO 2002-JP13244	20021218
W: CN, IN, JP, KR, NO, SG, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				

EP 1457531 A1 20040915 EP 2002-790807 20021218  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, FI, CY, TR, BG, CZ, EE, SK

US 2005065232 A1 20050324 US 2004-498821 20040623  
 PRIORITY APPLN. INFO.: JP 2002-308820 A 20021023  
 WO 2002-JP13244 W 20021218

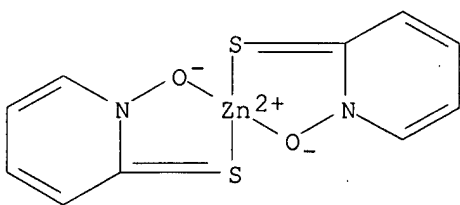
AB The present invention relates to an antifouling coating composition substantially free from cuprous oxide and organotin containing (A) a metal-containing copolymer obtained by copolymerizing a metal -containing polymerizable unsaturated monomer with a metal-free radical-polymerizable unsaturated monomer, (B) 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one, and (C) a metal pyrithione compound. The invention provides (i) an antifouling coating composition which is reduced in load on the environment and is excellent in antifouling properties, uniformity of coating film depletion, and long-term retention of antifouling properties of the coating film, (ii) antifouling coating films, and (iii) ships, underwater structures, fishing gear and fishing nets, covered with the films. Thus, 44.8% a monomer mixture solution comprising zinc salt of methacrylic acid and acrylic acid 52, Me methacrylate 1, Et acrylate 70.2, and 2-methoxyethyl acrylate 5.4 were polymerized to give a 45.6% copolymer solution, 45 parts of which was mixed

with zinc oxide 10, TTK Talc 17, red iron oxide 2, R 5N titanium white 4, AF-Z 2-pyridinethiol-1-oxide zinc salt 3, 30% Sea-Nine 211 4,5-dichloro-2-n-octylisothiazolin-3-one solution 10, Disparlon 4200-10 2, Disparlon A 603-20X 3, xylene 2, and propylene glycol monomethyl ether 2 parts, applied on an anticorrosion coat-treated sand blasting steel plate, and dried to give a test piece with good antifouling to sea water, adhesion, and uniform coating depletion.

IT **13463-41-7**, 2-Pyridinethiol-1-oxide zinc salt  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (AF-Z; antifouling coating compns. for antifouling coating films, ships, underwater structures, fishing gears, and fishing nets)

RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)- (9CI) (CA INDEX NAME)



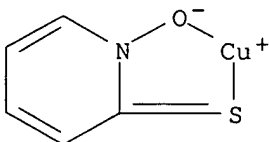
IT **154592-20-8**, Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-

RL: MOA (Modifier or additive use); USES (Uses)

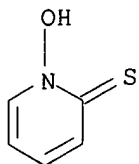
(Copper Pyrithione; antifouling coating compns. for antifouling coating films, ships, underwater structures, fishing gears, and fishing nets)

RN 154592-20-8 CAPLUS

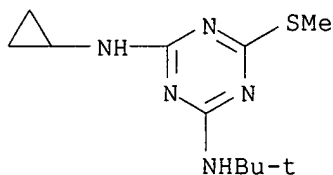
CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI) (CA INDEX NAME)



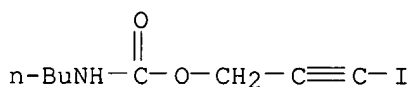
IT 1121-30-8D, Pyrithione, metal derivs. 28159-98-0,  
 Irgarol 1051 55406-53-6, Troysan Polyphase P 100  
 64359-81-5, Sea-Nine 211  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antifouling coating compns. for antifouling coating films, ships,  
 underwater structures, fishing gears, and fishing nets)  
 RN 1121-30-8 CAPLUS  
 CN 2(1H)-Pyridinethione, 1-hydroxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



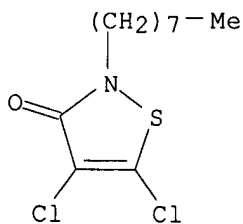
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 8 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:182931 CAPLUS  
 DOCUMENT NUMBER: 140:219463  
 TITLE: Acidified quaternized polymer and antifouling  
 compositions comprising this polymer for protection of  
 structures submersed in water  
 INVENTOR(S): Lines, Robert; Price, Clayton  
 PATENT ASSIGNEE(S): Akzo Nobel N.V., Neth.  
 SOURCE: PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004018533	A1	20040304	WO 2003-EP7693	20030716
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2495549	AA	20040304	CA 2003-2495549	20030716
EP 1534760	A1	20050601	EP 2003-792203	20030716
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003013260	A	20050614	BR 2003-13260	20030716
US 2004138331	A1	20040715	US 2003-623620	20030722
PRIORITY APPLN. INFO.:			EP 2002-255612	A 20020809
			WO 2003-EP7693	W 20030716

AB In a quaternary ammonium polymer and/or quaternary phosphonium polymer, the pendant quaternary ammonium groups and/or quaternary phosphonium groups are neutralized by counterions, where the counterions consist of the anionic residue of an acid having an aliphatic, aromatic, or alkaryl hydrocarbon group of  $\geq 6$  C atoms such as palmitic acid. This polymer is used in antifouling compns. An example paint contained palmitate-capped resin 16.37, hydroquinone 0.10, Tixogel MP 1.36, SiO<sub>2</sub> 1.01, xylene 3.05, Hansa-Scarlet RN-C 2.27, Copper Omadine 3.89, ZnO 11.63, cuprous oxide 36.73, Lutonal A25 3.54, and Me isoamyl ketone 2.27 parts.

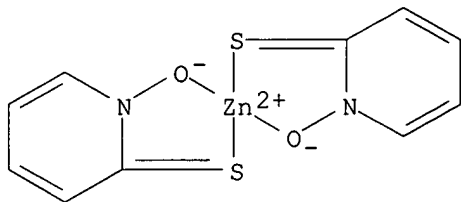
IT **13463-41-7**, Omadine Zinc **14915-37-8**, Omadine, cupric **28159-98-0**, Irgarol 1051 **64359-81-5**, Sea-Nine 211

RL: MOA (Modifier or additive use); USES (Uses)

(antifouling compns. containing acidified quaternized polymer binder and antifoulants)

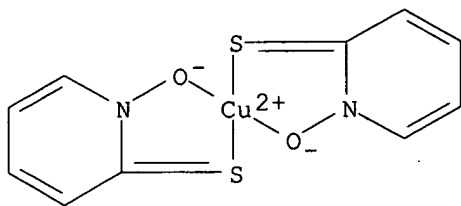
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy- $\kappa$ O)-2(1H)-pyridinethionato- $\kappa$ S<sub>2</sub>]-, (T-4)-(9CI) (CA INDEX NAME)

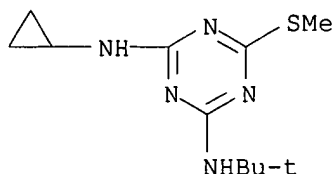


RN 14915-37-8 CAPLUS

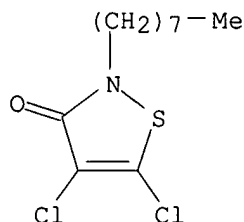
CN Copper, bis[1-(hydroxy- $\kappa$ O)-2(1H)-pyridinethionato- $\kappa$ S<sub>2</sub>]- (9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 9 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:2967 CAPLUS

DOCUMENT NUMBER: 140:61138

TITLE: Coating materials with biocide-containing microcapsules

INVENTOR(S): Baum, Ruediger; Antoni-Zimmermann, Dagmar; Wunder, Thomas; Schmidt, Hans-Juergen

PATENT ASSIGNEE(S): Thor Gmbh, Germany

SOURCE: PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004000953	A1	20031231	WO 2002-EP6806	20020619
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				



KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,  
GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1519995 A1 20050406 EP 2002-762295 20020619  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2004234603 A1 20041125 US 2004-489842 20040315

PRIORITY APPLN. INFO.: WO 2002-EP6806 W 20020619

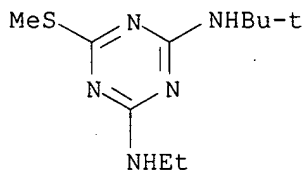
AB A coating material for protection against microorganism growth on surfaces exposed to moisture or water has a pH value of at least 11.0 or is provided with a base material having a pH value of at least 11.0, the coating material containing a biocide bonded to solid particles in a carrier material and released in a delayed manner. The coating material can be a plaster having a silicate, mineral or polymer resin binder, or a primer based on a silicate or polymer resin binder. The biocide can be encapsulated into formaldehyde-melamine resin or bonded to solid particles of porous ceramic materials or zeolites. Thus, a plaster having pH 11.5 was produced, the plaster comprising Bu acrylate-styrene copolymer (Acronal 290D), calcium carbonate (Omyacarb 40GU, Omyacarb 130GU) and an Al-Mg silicate (Plastorit 05) as binder major components, as well as formaldehyde-melamine resin-encapsulated zinc 2-pyridinethiol-1-oxide biocide. The biocide content in the plaster decreased from 531 ppm to 21 ppm upon exposure to water for 10 days, a plaster containing unencapsulated zinc 2-pyridinethiol-1-oxide had the biocide content decreased from 568 ppm to 2 ppm in 2 days.

IT 886-50-0 13463-41-7, Zinc 2-pyridinethiol-1-oxide  
26530-20-1, 2-n-Octylisothiazolin-3-one 55406-53-6,  
Acticite IPW 50 64359-81-5, 4,5-Dichloro-2-octylisothiazolin-3-one

RL: MOA (Modifier or additive use); USES (Uses)  
(coating materials with biocide-containing microcapsules)

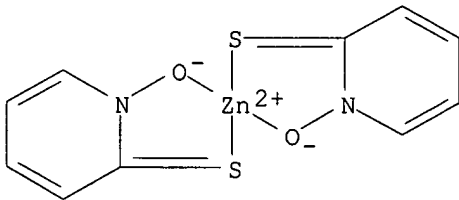
RN 886-50-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-  
(9CI) (CA INDEX NAME)



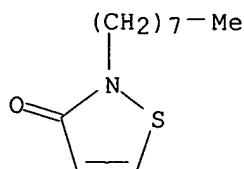
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
(9CI) (CA INDEX NAME)

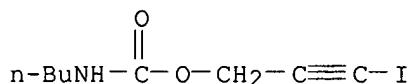


RN 26530-20-1 CAPLUS

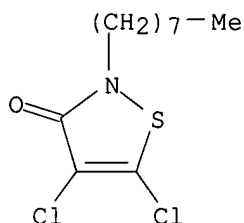
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
 CN .Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 10 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:717216 CAPLUS  
 DOCUMENT NUMBER: 139:232031  
 TITLE: Antifouling coating composition, coating film, underwater material covered with the coating film, and antifouling coating method  
 INVENTOR(S): Oya, Masaaki; Nakamura, Naoya; Tsuboi, Makoto  
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 49 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1342756	A1	20030910	EP 2003-251373	20030306
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2003261816	A2	20030919	JP 2002-60696	20020306
US 2003207962	A1	20031106	US 2003-375005	20030228
US 6916860	B2	20050712		
SG 99418	A1	20031027	SG 2003-2238	20030303
NO 2003001003	A	20030908	NO 2003-1003	20030304
CN 1442461	A	20030917	CN 2003-120256	20030306
PRIORITY APPLN. INFO.:			JP 2002-60696	A 20020306

AB An antifouling coating composition comprises (A) a silyl ester copolymer containing constituent units derived from a polymerizable unsatd. carboxylic acid

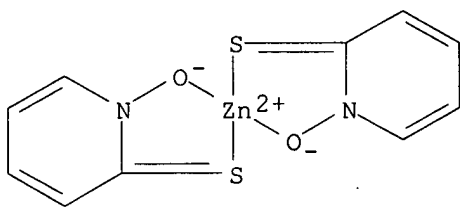
silyl ester, (B) a carboxylic acid, (C) a bivalent or trivalent metal compound, optional other antifoulant, and (D) a dehydrating agent, such that there is salt formation between ingredients B and C to promote reduced binder hydrolysis. An example coating contained 2.3 parts isononanoic acid, 6 parts ZnO, 20 parts copolymer solution (preparation given), 44 parts cuprous oxide, 3 parts 2-pyridinethiol 1-oxide copper salt, 2 parts TiO<sub>2</sub>, 2 parts anhydrous gypsum, 1.5 parts Disparlon 4200-20, 4 parts Disparlon A-603-20X, and 12.7 parts xylene.

IT 13463-41-7, 2-Pyridinethiol-1-oxide zinc salt 28159-98-0  
 , 2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine  
 64359-81-5, 4,5-Dichloro-2-octyl isothiazolin-3-one  
 154592-20-8

RL: MOA (Modifier or additive use); USES (Uses)  
 (antifoulant; antifouling cracking-resistant coating composition based on  
 silyl ester copolymer with good adhesion to coated substrate)

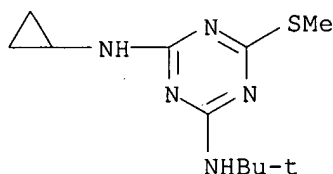
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)



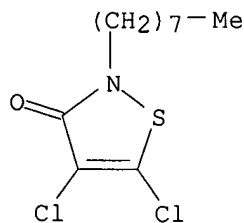
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



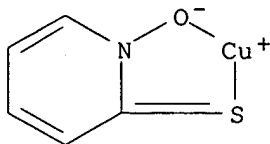
RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS

CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

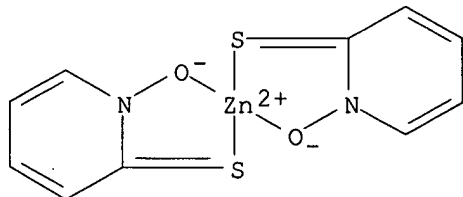
L29 ANSWER 11 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:628053 CAPLUS  
 DOCUMENT NUMBER: 139:151137  
 TITLE: Bactericidal and antifouling coating containing poly(hexamethyleneguanidine) for structure on grounds  
 INVENTOR(S): Someya, Norihisa; Tsudome, Takayuki; Kim, Jin-man; Che, Ki-sung  
 PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; Sk Chemical Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003226846	A2	20030815	JP 2002-64492	20020204
PRIORITY APPLN. INFO.:			JP 2002-64492	20020204

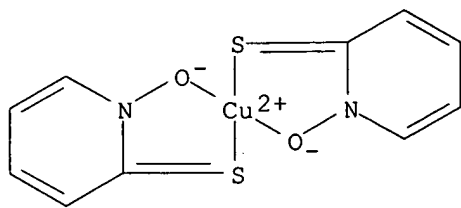
AB The coating, used for building walls, kitchen walls, etc., contains poly(hexamethyleneguanidine) phosphate (I). Alternatively, the coating contains poly(hexamethyleneguanidine) salts with inorg. acids, e.g., HCl, H<sub>2</sub>SO<sub>4</sub>, HNO<sub>3</sub>, etc., or organic acids, e.g., carboxylic acids, etc. Thus, a mixture of I 8.0, an acrylic resin emulsion 40.0, and water 52.0 parts was applied on a wood test piece, which was subjected to accelerated weathering test for 500 h to show retention of adhesive strength and no discoloration on the surface.

IT 13463-41-7 14915-37-8 26530-20-1,  
 2-Octyl-4-isothiazolin-3-one 28159-98-0 55406-53-6,  
 3-Iodo-2-propynylbutyl carbamate 64359-81-5,  
 4,5-Dichloro-2-octyl-4-isothiazolin-3-one  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (in bactericidal antifouling coating containing  
 poly(hexamethyleneguanidine) salt for structure on grounds)

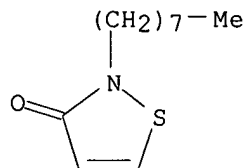
RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS<sub>2</sub>]-, (T-4)-(9CI) (CA INDEX NAME)



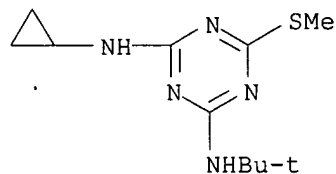
RN 14915-37-8 CAPLUS  
 CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS<sub>2</sub>]- (9CI)  
 (CA INDEX NAME)



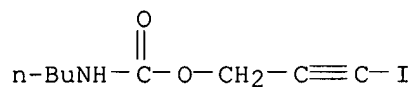
RN 26530-20-1 CAPLUS  
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



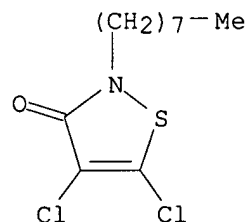
RN 28159-98-0 CAPLUS  
CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 12 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:628052 CAPLUS  
DOCUMENT NUMBER: 139:151136  
TITLE: Antifouling coating containing  
poly(hexamethyleneguanidine) salt  
INVENTOR(S): Someya, Norio; Tsuru, Takayuki; Kim, Jin-man; Che,

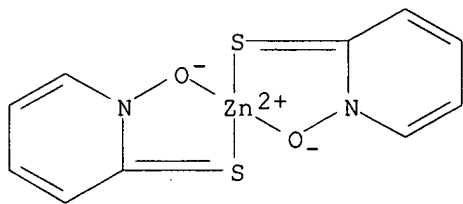
PATENT ASSIGNEE(S): Ki-sun Daiwa Chemical Industries Co., Ltd., Japan; Sk Chemical Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003226845	A2	20030815	JP 2002-64491	20020204
PRIORITY APPLN. INFO.:			JP 2002-64491	20020204

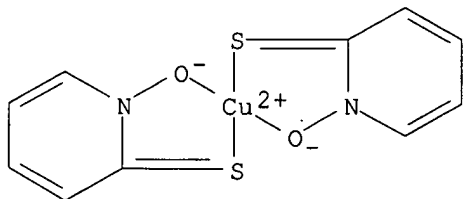
AB The marine antifouling coating, which is used for fish nets, ship, and marine structures, contains poly(hexamethyleneguanidine) phosphate (I). Alternatively, the antifouling coating contains poly(hexamethyleneguanidine) salts with inorg. acids, e.g., HCl, H<sub>2</sub>SO<sub>4</sub>, HNO<sub>3</sub>, etc., or organic acids, e.g., carboxylic acids, etc., which is used as bactericidal coatings on structures on grounds. Thus, a polyethylene fish net was impregnated with a mixture of I 10.0, an acrylic resin emulsion 40.0, and water 50.0 parts then soaked in seawater for 6 mo to show antifouling effect.

IT 13463-41-7 14915-37-8 26530-20-1,  
 2-Octyl-4-isothiazolin-3-one 28159-98-0 55406-53-6,  
 3-Iodo-2-propynylbutyl carbamate 64359-81-5,  
 4,5-Dichloro-2-octyl-4-isothiazolin-3-one  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (in marine antifouling coating containing poly(hexamethyleneguanidine) phosphate)

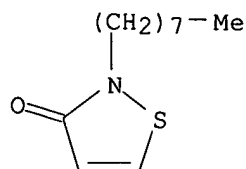
RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS<sub>2</sub>]-, (T-4)-(9CI) (CA INDEX NAME)



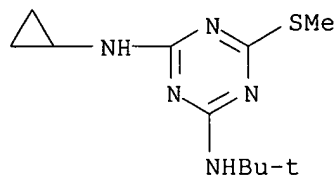
RN 14915-37-8 CAPLUS  
 CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS<sub>2</sub>]- (9CI)  
 (CA INDEX NAME)



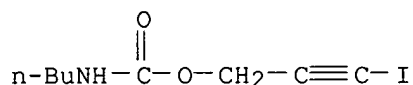
RN 26530-20-1 CAPLUS  
 CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



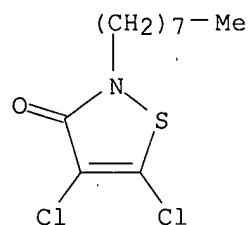
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 13 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:582364 CAPLUS  
 DOCUMENT NUMBER: 139:129406  
 TITLE: Synergistic antimicrobial agents containing quaternary ammonium salts  
 INVENTOR(S): Kubota, Takao; Tanaka, Shoji; Matsuhisa, Shigeyoshi  
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003212706	A2	20030730	JP 2002-331715	20021115
PRIORITY APPLN. INFO.:			JP 2001-353771	A 20011119
OTHER SOURCE(S):	MARPAT 139:129406			

AB The agents for control of bacteria, fungi, yeast, and algae, contain bis(quaternary ammonium) salts and  $\geq 1$  compound selected from isothiazolines, nitro alcs., dithiols, thiophenes, haloacetylenes, phthalimides, haloalkylthio compds., pyrithiones, phenylureas, triazines, guanidines, triazoles, and benzimidazoles. Concomitant addition of Dibnirol A 75 (2,2-dibromo-2-nitro-1-ethanol; DBNE) and Dimer 38 [N,N'-hexamethylenebis(4-carbamoyl-1-decylpyridiniumbromide); HMDP-Br] showed synergistic antimicrobial effects in a mixed culture containing *Serratia marcescens*, *Escherichia coli*, and *Pseudomonas aeruginosa* with min. inhibitory concns. of 3 ppm for DBNE and 0.2 ppm for HMDP-Br.

IT 501940-47-2 501940-49-4 501940-55-2

568583-81-3 568583-83-5 568583-88-0

569370-97-4

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(synergistic industrial microbicides containing bis(quaternary ammonium) salts)

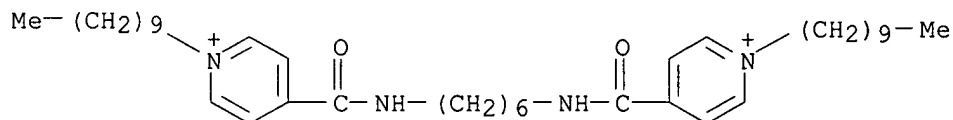
RN 501940-47-2 CAPLUS

CN Pyridinium; 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-, dibromide, mixt. with 2-octyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

CRN 190513-77-0

CMF C38 H64 N4 O2 . 2 Br

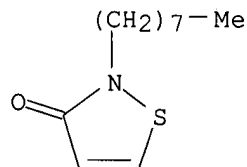


● 2 Br<sup>-</sup>

CM 2

CRN 26530-20-1

CMF C11 H19 N O S



RN 501940-49-4 CAPLUS

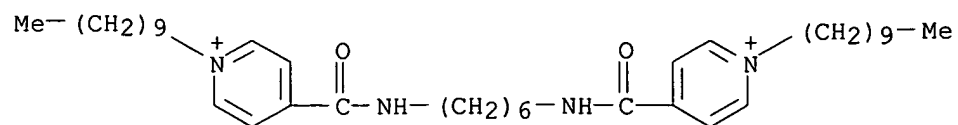
CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-, dibromide, mixt. with (T-4)-bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]zinc (9CI) (CA INDEX NAME)

CM 1

CRN 190513-77-0

CMF C38 H64 N4 O2 . 2 Br





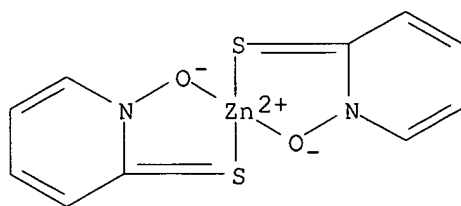
● 2 Br<sup>-</sup>

CM 2

CRN 13463-41-7

CMF C10 H8 N2 O2 S2 Zn

CCI CCS



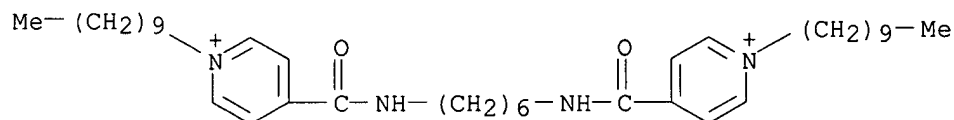
RN 501940-55-2 CAPLUS

CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-,  
dibromide, mixt. with 2-methyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

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CRN 190513-77-0

CMF C38 H64 N4 O2 . 2 Br

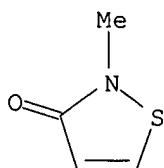


● 2 Br<sup>-</sup>

CM 2

CRN 2682-20-4

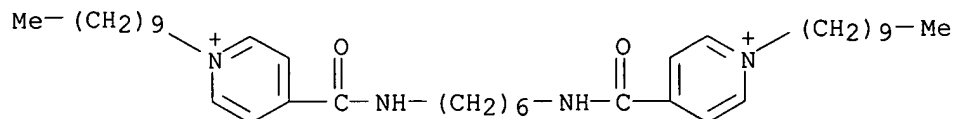
CMF C4 H5 N O S



RN 568583-81-3 CAPLUS  
 CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-,  
 dibromide, mixt. with N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)-  
 1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

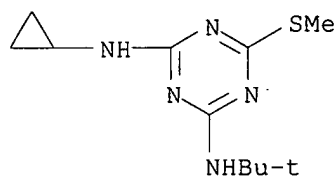
CRN 190513-77-0  
 CMF C38 H64 N4 O2 . 2 Br



● 2 Br<sup>-</sup>

CM 2

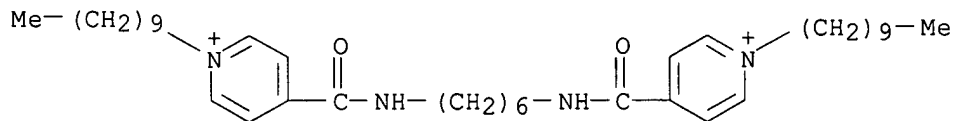
CRN 28159-98-0  
 CMF C11 H19 N5 S



RN 568583-83-5 CAPLUS  
 CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-,  
 dibromide, mixt. with 3-iodo-2-propynyl butylcarbamate (9CI) (CA INDEX  
 NAME)

CM 1

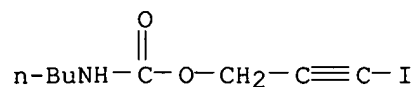
CRN 190513-77-0  
 CMF C38 H64 N4 O2 . 2 Br



● 2 Br<sup>-</sup>

CM 2

CRN 55406-53-6  
 CMF C8 H12 I N O2



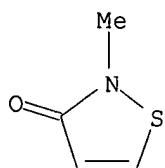
RN 568583-88-0 CAPLUS

CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-, diacetate, mixt. with 2-methyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

CRN 2682-20-4

CMF C4 H5 N O S



CM 2

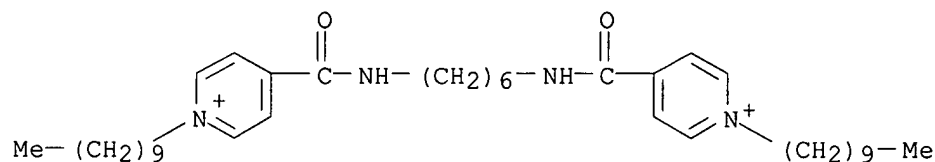
CRN 265996-50-7

CMF C38 H64 N4 O2 . 2 C2 H3 O2

CM 3

CRN 50569-15-8

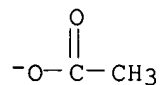
CMF C38 H64 N4 O2



CM 4

CRN 71-50-1

CMF C2 H3 O2

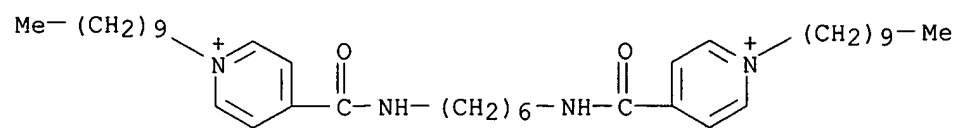


RN 569370-97-4 CAPLUS

CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-, dibromide, mixt. with 5-chloro-2-methyl-3(2H)-isothiazolone, 4,5-dichloro-3H-1,2-dithiol-3-one, N,4-dihydroxy- $\alpha$ -oxobenzeneethanimidoyl chloride and 2-methyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

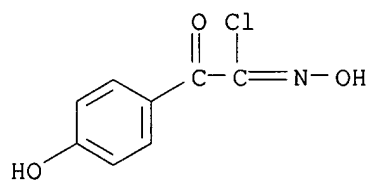
CRN 190513-77-0  
CMF C38 H64 N4 O2 . 2 Br



● 2 Br<sup>-</sup>

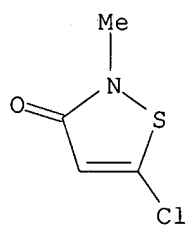
CM 2

CRN 34911-46-1  
CMF C8 H6 Cl N O3



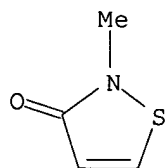
CM 3

CRN 26172-55-4  
CMF C4 H4 Cl N O S



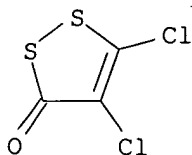
CM 4

CRN 2682-20-4  
CMF C4 H5 N O S



CM 5

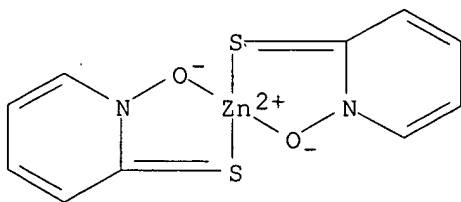
CRN 1192-52-5  
CMF C3 C12 O S2



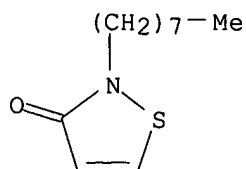
L29 ANSWER 14 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:568201 CAPLUS  
DOCUMENT NUMBER: 140:200229  
TITLE: Antimicrobial polymer compositions  
AUTHOR(S): Anon.  
CORPORATE SOURCE: UK  
SOURCE: Research Disclosure (2003), 470(June), P789 (No. 470075)  
CODEN: RSDSBB; ISSN: 0374-4353  
PUBLISHER: Kenneth Mason Publications Ltd.  
DOCUMENT TYPE: Journal; Patent  
LANGUAGE: English  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RD 470075		20030610		

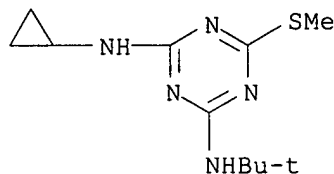
PRIORITY APPLN. INFO.: RD 2003-470075 20030610  
AB Various antimicrobial agents, such as 2,4,4'-trichloro-2'-hydroxyphenyl ether and 4-tert-butylamino-6-cyclopropylamino-2-methylthio-s-triazine, are disclosed. Dry blending as a powder or wet mixing as solns., dispersions or suspensions are applied, to incorporate antimicrobial agents into the polymer products. These antimicrobial polymer products are useful in building and construction, household items and furnishings, elec. and electronic parts, and many other applications.  
IT 13463-41-7 26530-20-1 28159-98-0 64359-81-5  
RL: MOA (Modifier or additive use); USES (Uses)  
(antimicrobial polymer comps. and their applications)  
RN 13463-41-7 CAPLUS  
CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



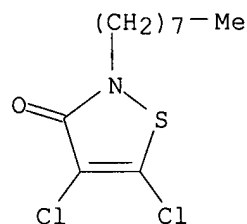
RN 26530-20-1 CAPLUS  
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 15 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:508652 CAPLUS  
 DOCUMENT NUMBER: 139:86738  
 TITLE: Antifouling coating compositions, films therefrom, the film-coated ships or underwater structures and antifouling method therewith  
 INVENTOR(S): Harada, Shin; Onishi, Yasuyuki; Tanaka, Hideyuki; Mimura, Hiroaki; Oie, Masaaki; Koshono, Yukio; Nishiguchi, Takahiro  
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003183567	A2	20030703	JP 2001-387590	20011220
PRIORITY APPLN. INFO.:			JP 2001-387590	20011220

AB Title comps. contain (a) silyl polymerizable unsatd. carboxylate-based polymers and (b) agathic diacid (derivs.), agathic diacid (derivative) metal salts, and/or agathic diacid (derivative)- or metal salt-based resin acids. A composition containing Me methacrylate-triisopropylsilyl acrylate copolymer, copal extract Zn salt (51% nonvolatile content), Cu<sub>2</sub>O, Cu 2-pyridinethiol-1-oxide showed good antifouling ability over 2 yr (100-μm thick film on vinyl

resin- and epoxy resin-coated steel plate, in water at 1-m depth) and decrease of film thickness 9  $\mu\text{m}/2$  mo.

IT 13463-41-7, Zinc 2-pyridinethiol-1-oxide 14915-37-8

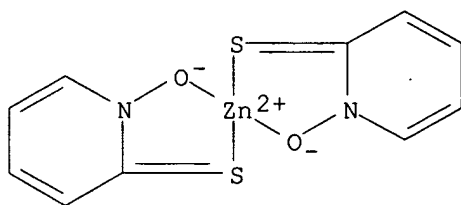
28159-98-0, 2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine 64359-81-5

RL: TEM (Technical or engineered material use); USES (Uses)

(copal extract- and silyl (meth)acrylate resin-containing coatings with high antifouling ability)

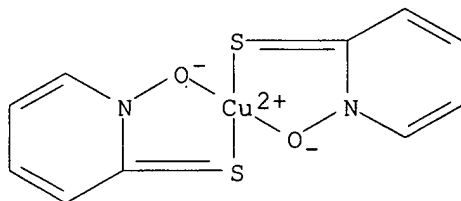
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy- $\kappa\text{O}$ )-2(1H)-pyridinethionato- $\kappa\text{S}_2$ ]-, (T-4)-(9CI) (CA INDEX NAME)



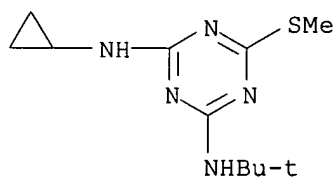
RN 14915-37-8 CAPLUS

CN Copper, bis[1-(hydroxy- $\kappa\text{O}$ )-2(1H)-pyridinethionato- $\kappa\text{S}_2$ ]- (9CI) (CA INDEX NAME)



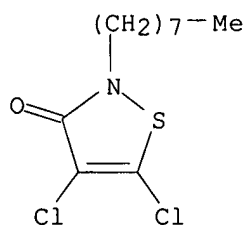
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



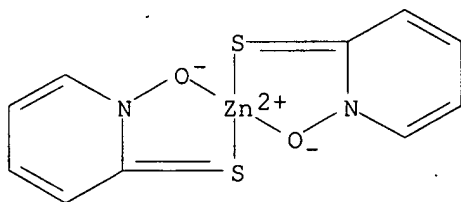
ACCESSION NUMBER: 2003:309446 CAPLUS  
 DOCUMENT NUMBER: 138:322763  
 TITLE: Antifouling coating compositions and marine constructions coated therewith  
 INVENTOR(S): Yoshikawa, Eiichi; Tanabe, Shinichi; Tsuboi, Makoto; Ooka, Masataka; Matsusawa, Hiroshi  
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan; Dainippon Ink and Chemicals, Inc.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003119420	A2	20030423	JP 2001-316095	20011012
PRIORITY APPLN. INFO.:			JP 2001-316095	20011012

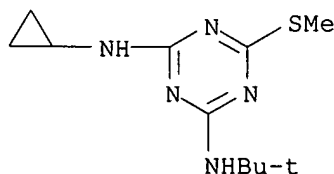
AB The coating comps. comprise (A) vinyl polymers containing (a) repeating units CHR1CR2CO2CHR3CO2R4 (R1, R2 = H, Me; R3 = H, Ph, C1-12 alkyl; R4 = monovalent organic group) and (b) repeating units prepared from vinyl monomers containing N-substituted carboxylic acid amides and/or N-vinylcarboxylic acid amides and (B) antifouling agents. Thus, a composition containing 37 parts vinyl polymer prepared from methoxycarbonylmethyl methacrylate, Me methacrylate, and N-methoxymethylacrylamide, 41 parts NC 303 (copper suboxide), and other additives was applied on a coated steel plate and dried to give a coating with improved adhesion and crack resistance.

IT **13463-41-7**, Zinc pyrithione **28159-98-0**, 2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine **64359-81-5**, 4,5-Dichloro-2-octyl-4-isothiazolin-3-one **154592-20-8**, Copper pyrithione  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses) (antifouling agent; antifouling coating comps. for marine constructions)

RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)

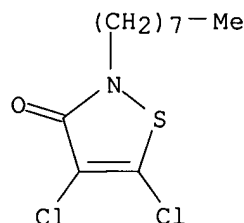


RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)

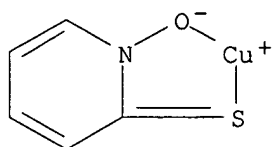




RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



L29 ANSWER 17 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:309445 CAPLUS  
 DOCUMENT NUMBER: 138:322762  
 TITLE: Antifouling coating compositions and marine constructions coated therewith  
 INVENTOR(S): Matsusawa, Hiroshi; Ooka, Masataka; Yoshikawa, Eiichi; Tanabe, Shinichi; Tsuboi, Makoto  
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan; Chugoku Marine Paints, Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003119419	A2	20030423	JP 2001-316094	20011012
PRIORITY APPLN. INFO.:			JP 2001-316094	20011012

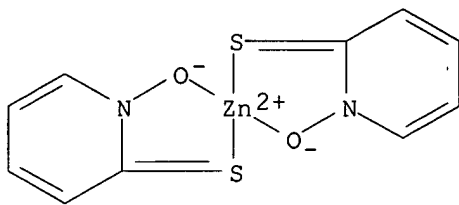
AB The coating compns. comprise (A) vinyl polymers containing (a) repeating units CHR1CR2CO2CHR3CO2R4 (R1, R2 = H, Me; R3 = H, Ph; C1-12 alkyl; R4 = monovalent organic group) and (b) repeating units prepared from vinyl monomers containing polyoxyalkylenes and (B) antifouling agents. Thus, a composition containing 37 parts vinyl polymer prepared from methoxycarbonylmethyl methacrylate, Me methacrylate, and methoxypolyethylene glycol monomethacrylate, 41 parts NC 303 (copper suboxide), and other additives was applied on a coated steel plate and dried to give a coating with improved adhesion and crack resistance.

IT **13463-41-7**, Zinc pyrrithione **28159-98-0**,  
 2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine  
**64359-81-5**, 4,5-Dichloro-2-octyl-4-isothiazolin-3-one  
**154592-20-8**, Copper pyrrithione  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(antifouling agent; antifouling coating compns. for marine constructions)

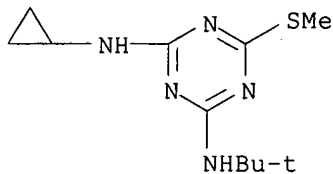
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy- $\kappa$ O)-2(1H)-pyridinethionato- $\kappa$ S2]-, (T-4)-(9CI) (CA INDEX NAME)



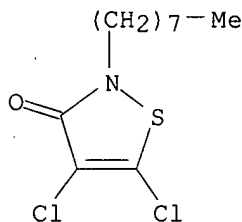
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



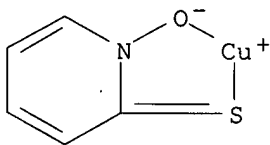
RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS

CN Copper, [1-(hydroxy- $\kappa$ O)-2(1H)-pyridinethionato- $\kappa$ S2]- (9CI) (CA INDEX NAME)



L29 ANSWER 18 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:18865 CAPLUS

DOCUMENT NUMBER: 138:259262

TITLE: Risk comparison of antifouling biocides

AUTHOR(S): Ranke, J.; Jastorff, B.

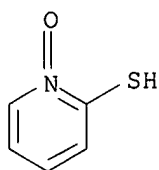
CORPORATE SOURCE: UFT Centre for Environmental Research and Environmental Technology, University of Bremen, Germany

SOURCE: Fresenius Environmental Bulletin (2002), 11(10a), 769-772  
 CODEN: FENBEL; ISSN: 1018-4619  
 PUBLISHER: PSP - Parlar Scientific Publications  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

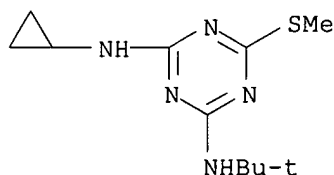
AB The present paper reports on the current ecotoxicol. risk profiles of the five antifouling biocides, copper, tributyltin, Irgarol 1051, Sea-Nine 211 and pyrithionate. These risk profiles consist of evaluations of the five risk indicators release, spatiotemporal range, bioaccumulation, biol. activity and uncertainty for each of the biocides. The indicators are evaluated from the data from scientific as well as administrative sources. For the evaluation of the spatiotemporal range of the substances, results from a global fate model were used, which was recently presented elsewhere.

IT 1121-31-9, 2-Mercaptopyridine-N-oxide 28159-98-0, Irgarol 1051 64359-81-5, Sea-Nine 211  
 RL: ADV (Adverse effect, including toxicity); NUU (Other use, unclassified); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
 (antifouling agent; risk comparison of antifouling biocides)

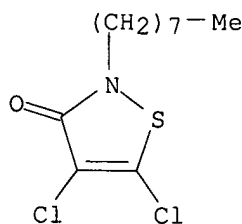
RN 1121-31-9 CAPLUS  
 CN 2-Pyridinethiol, 1-oxide (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 19 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:600694 CAPLUS

DOCUMENT NUMBER: 138:34362  
 TITLE: Effects of new antifouling compounds on the development of sea urchin  
 AUTHOR(S): Kobayashi, Naomasa; Okamura, Hideo  
 CORPORATE SOURCE: Doshisha University, Kamikyo-ku, Kyoto, 606-8580, Japan  
 SOURCE: Marine Pollution Bulletin (2002), 44(8), 748-751  
 CODEN: MPNBAZ; ISSN: 0025-326X  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Tributyltin oxide (TBTO) was used worldwide in marine antifouling paints as a biocide for some time. However, it produced toxic effects, especially in marine water/sediment ecosystems. Consequently, its use in antifouling paints was prohibited in many countries. In this study, the toxicity of alternative and/or new antifouling biocides compared with TBTO is assessed by a biol. method. The effects of these chems. on marine species were not well studied. This paper assesses, comparatively, the effects of 8 biocides on sea urchin eggs and embryos. The chems. assessed were TBTO, Irgarol 1051, M1 (the persistent degradation product of Irgarol), Diuron, Zn pyrithione, KH101, Sea-Nine 211, and Cu pyrithione. For these chems., toxicity appears to be in the order Zn pyrithione>Sea-Nine 211>KH101>Cu pyrithione>TBTO>Diuron.apprx.Irgarol 1051>M1. Here, the authors show that zinc pyrithione, Sea-Nine 211, KH101, and copper pyrithione are much more toxic to sea urchins than TBTO or the other chems.

IT 13463-41-7, Zinc pyrithione 28159-98-0, Irgarol 1051

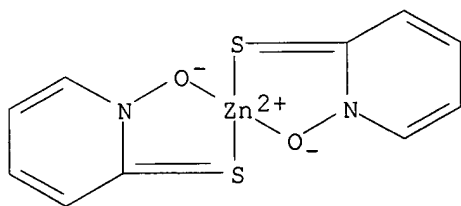
30125-65-6 64359-81-5, Sea-nine 211 154592-20-8

, Copper pyrithione

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
 (antifouling biocides effects on sea urchin development)

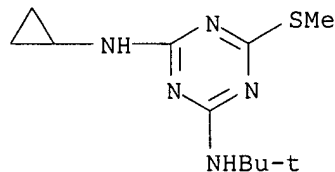
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)



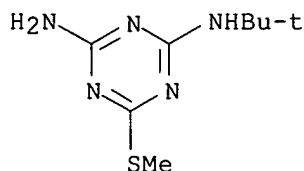
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)

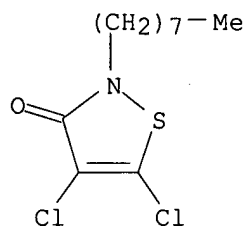


RN 30125-65-6 CAPLUS

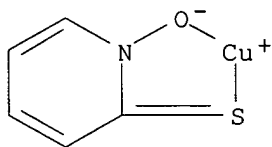
CN 1,3,5-Triazine-2,4-diamine, N-(1,1-dimethylethyl)-6-(methylthio)- (9CI)  
 (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



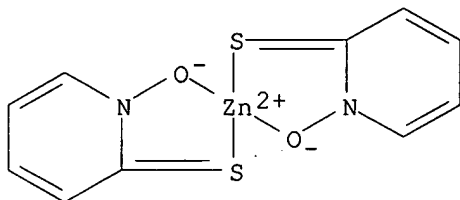
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 20 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:171499 CAPLUS  
 DOCUMENT NUMBER: 136:233633  
 TITLE: Antifouling acrylic coating compositions, their films and antifouling method therewith  
 INVENTOR(S): Tatsuno, Yoichi; Matsuoka, Iwao; Tanaka, Hideyuki  
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

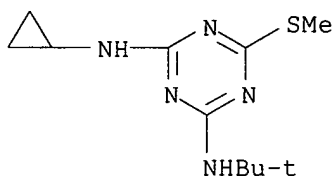
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002069360	A2	20020308	JP 2000-260118	20000830
PRIORITY APPLN. INFO.:			JP 2000-260118	20000830

AB Title storage-stable compns. contain organic antifouling agents and (meth)acrylic resins prepared from (a) aromatic vinyl compds. and/or alkyl (meth)acrylates and (b) hydroxyalkyl (meth)acrylates. A composition containing Bu methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-styrene copolymer, rosin, tricresyl phosphate, Rhodan Cu, PK boron, and Zn pyrithione showed good storage stability at 40° for 1 mo, leveling ability, and antifouling ability over 6 mo.

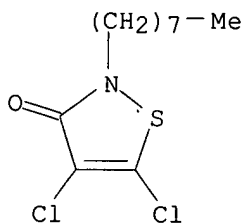
IT 13463-41-7, Zinc pyrithione 28159-98-0,  
 2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine  
 64359-81-5, Sea-nine 211  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (organic fouling inhibitor-containing acrylic styrene resin coatings with  
 storage stability and antifouling ability)  
 RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-  
 (methylthio)- (9CI) (CA INDEX NAME)



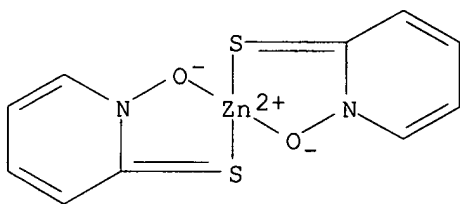
RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



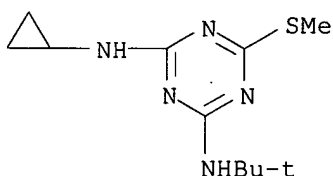
L29 ANSWER 21 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:106428 CAPLUS  
 DOCUMENT NUMBER: 136:336390  
 TITLE: Toxicity evaluation of new antifouling compounds using  
 suspension-cultured fish cells  
 AUTHOR(S): Okamura, H.; Watanabe, T.; Aoyama, I.; Hasobe, M.  
 CORPORATE SOURCE: Research Institute for Bioresources, Okayama  
 University, Kurashiki, 710-0046, Japan  
 SOURCE: Chemosphere (2002), 46(7), 945-951  
 CODEN: CMSHAF; ISSN: 0045-6535  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB A simple, rapid toxicity test was developed using the suspension-cultured  
 fish cell line CHSE-sp derived from chinook salmon Oncorhynchus  
 tshawytscha embryos to assess the toxicity of new marine antifouling  
 compds. The compds. tested were copper pyrithione, Diuron, Irgarol 1051,

KH101, Sea-Nine 211, and zinc pyrithione, all of which have been nominated in Japan as possible replacements for organotin compds. The in vitro acute toxicity (24-h EC50) of the six compds. to these fish cells was evaluated using the dye Alamar Blue to determine cell viability, and then correlated with the results of in vivo chronic toxicities (28-day LC50) to juvenile rainbow trout *Oncorhynchus mykiss*. The suspension-cultured fish cells were found to be suitable for the screening of such chems. before performing an in vivo test. The toxicities of the test compds. obtained from both tests, shown in decreasing order, were as follows: copper pyrithione > zinc pyrithione > KH101 ≥ Sea-Nine 211 > Diuron > Irgarol 1051. The herbicides Diuron and Irgarol 1051 showed the least toxicity, while the pyrithiones had the greatest toxicity.

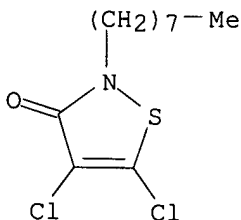
IT 13463-41-7, Zinc pyrithione 28159-98-0, Irgarol 1051  
 64359-81-5, Sea-nine 211 154592-20-8, Copper pyrithione  
 RL: ADV (Adverse effect, including toxicity); ANT (Analyte); ANST  
 (Analytical study); BIOL (Biological study)  
 (toxicity testing of antifouling compds. by suspension-cultured fish cells)  
 RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)



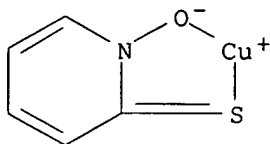
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 22 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:64652 CAPLUS

DOCUMENT NUMBER: 137:64571

TITLE: The effect of changes in environmental parameters on the release of organic booster biocides from antifouling coatings

AUTHOR(S): Thomas, Kevin V.; Raymon, Katherine; Chadwick, John; Waldock, Mike J.

CORPORATE SOURCE: Centre Environment, Fisheries and Aquaculture Science, Burnham Lab., CM0 8HA, UK

SOURCE: Defence Science and Technology Organisation [Technical Report] DSTO-GD (2001), DSTO-GD-0287, 157-170

CODEN: DSTOFV; ISSN: 1441-0176

DOCUMENT TYPE: Report

LANGUAGE: English

AB Understanding the effects of environmental variables on the rate of booster biocide release from antifouling formulations is necessary so that the measurements obtained by laboratory-based tests are correctly interpreted in

environmental risk assessment. To allow the effects of anti-fouling actives on aquatic systems to be predicted effectively, we evaluated alterations in release rate as environmental variables change during tests simulating normal use. A standardized laboratory based release rate determination

method (ISO/DIS 15181-1) was used to obtain release rate data for a number of booster biocides; Irgarol 1051, diuron, dichlofluanid, zinc pyrithione, Kathon 5287, TCMS pyridine and TCMTB. These data were then compared with those determined using a flume system designed to simulate environmental conditions. The effects of short-term changes (4 days) in environmental parameters such as temperature, pH, salinity, suspended particulate matter and vessel speed on TBT, copper, Irgarol 1051, diuron, dichlofluanid, zinc pyrithione, Kathon 5287, TCMTB and TCMS pyridine release rates was also evaluated. Release rates determined using the flume system were consistently lower than those obtained using the ISO method for all biocides, excluding dichlofluanid and TCMS pyridine. It was observed that salinity, temperature,

pH and suspended particulate matter had very little or no effect on the release rate of all biocides tested. The effects of longer-term changes (3 mo) in temperature and salinity on Irgarol 1051 release rates were investigated. Using the same test systems it was observed that increased temperature (15-25°C) significantly increased the release of Irgarol 1051 from 0.4 to 2.0 µg cm⁻² day⁻¹. Comparisons between the data obtained from both laboratory and environmentally relevant test systems, along with possible implications on the environmental risk assessment of antifouling paint biocides, are discussed.

IT 13463-41-7, Zinc pyrithione 28159-98-0, Irgarol 1051 64359-81-5, Kathon 5287

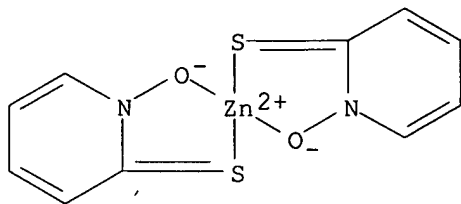
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(biocide; effect of changes in environmental parameters on release of organic booster biocides from antifouling coatings)

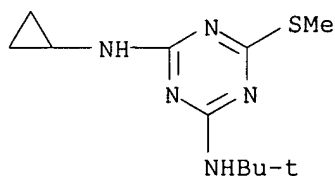
RN 13463-41-7 CAPLUS



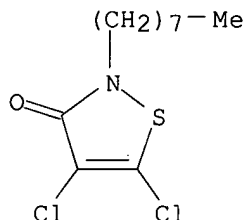
CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
(9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS  
CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 23 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:857586 CAPLUS

DOCUMENT NUMBER: 136:7739

TITLE: Antifouling coating compositions, their films, ships and underwater structures coated therewith

INVENTOR(S): Tanaka, Hideyuki; Tatsuno, Yoichi; Matsuoka, Iwao

PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

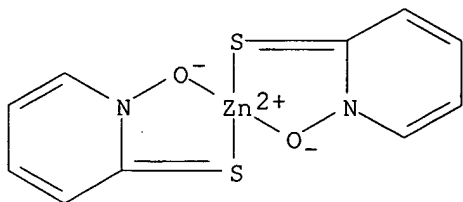
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

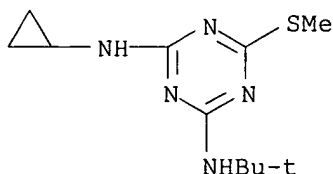
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001329228	A2	20011127	JP 2000-154539	20000525
PRIORITY APPLN. INFO.:			JP 2000-154539	20000525

AB Title comps. contain metal unsatd. carboxylate linear aliphatic carboxylate-based resins and Ph3B.amine complexes. A composition containing Et acrylate-Me methacrylate-Zn acrylate-Zn acrylate oleate copolymer and PK boron showed good adhesion, dryability at 5-20° for 1 day, and

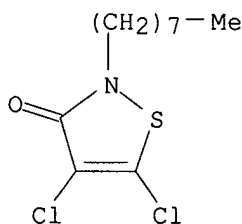
antifouling ability over 6 mo.  
 IT 13463-41-7, Zinc pyrithione 28159-98-0, Irgarol 1051  
 64359-81-5, Sea nine 211  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (organic antifouling agent-containing metal unsatd carboxylate acrylic  
 coatings)  
 RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-  
 (methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 24 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:847346 CAPLUS  
 DOCUMENT NUMBER: 136:7732  
 TITLE: Antifouling coating compositions, their films, ships  
 and underwater structures coated therewith  
 INVENTOR(S): Ono, Masashi; Onishi, Yasuyuki  
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001323208	A2	20011122	JP 2000-140597	20000512

PRIORITY APPLN. INFO.:

JP 2000-140597

20000512

AB Title compns. contain metal unsatd. carboxylate-containing polymers, Cu and/or inorg. Cu compds., and organic antifouling agents selected from BPh3.amine complexes, BPh4.NH4, TMTD, Zn dimethyldithiocarbamate, Mn 2-ethylenebis(dithiocarbamate), dimethyldichlorophenyl urea, 2,4,6-trichlorophenylmaleimide, 2-methylthio-4-tert-butylamino-6-cyclopropyl-s-triazine, 4,5-dichloro-2-n-octyl-4-isothiazoline-3-one, and 2,4,5,6-tetrachloroisophthalonitrile. A composition containing Et acrylate-Me methacrylate-methacrylic acid copolymer basic Zn salt and Cu2O, ZnO, Cu pyrithione, and Sea-nine 211 showed good antifouling ability over 1 yr.

IT 13463-41-7, Omadine zinc 28159-98-0, Irgarol 1051

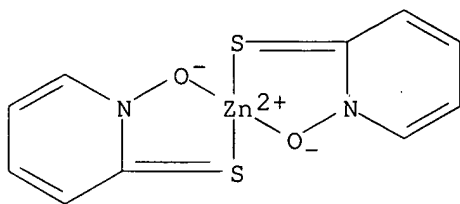
64359-81-5, Sea-nine 211 154592-20-8, Copper pyrithione

RL: MOA (Modifier or additive use); USES (Uses)

(organic antifouling agent-containing metal unsatd carboxylate acrylic coatings)

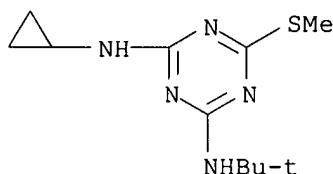
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



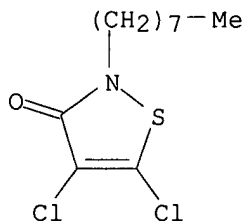
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



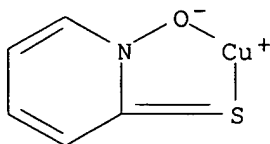
RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS

CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI) (CA INDEX NAME)



L29 ANSWER 25 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:763111 CAPLUS

DOCUMENT NUMBER: 135:319585

TITLE: Antifouling coating compositions and novel vinyl resins therefor

INVENTOR(S): Tokunaga, Koji; Ooka, Masataka; Tanaka, Hiroo; Oda, Asako; Matsuzawa, Hiroshi; Tsuboi, Makoto; Yoshikawa, Eiichi; Yuki, Yasuhiro; Hiyoshi, Satoshi

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001077238	A1	20011018	WO 2001-JP3158	20010412
W: CN, GB, KR, US				
JP 2001354722	A2	20011225	JP 2001-113095	20010411
JP 2002003776	A2	20020109	JP 2001-114499	20010412
GB 2381792	A1	20030514	GB 2002-23587	20010412
GB 2381792	B2	20040804		
GB 2398788	A1	20040901	GB 2004-12669	20010412
GB 2398788	B2	20050202		
GB 2398789	A1	20040901	GB 2004-12682	20010412
GB 2398789	B2	20050202		
US 2003118544	A1	20030626	US 2002-240759	20021011
PRIORITY APPLN. INFO.:			JP 2000-110833	A 20000412
			JP 2000-110935	A 20000412
			GB 2002-23587	A3 20010412
			WO 2001-JP3158	W 20010412

AB Title comps. comprise antifouling agents and vinyl resins based on R1X1Q1COOQ2X2R2 units (X1, X2 = ester or carbonyl group; Q1 itself or its adjacent carbon atom forming ethylene structure with X1 and carbon atom of COO group; Q2 = geminal or vicinal alkylene, arylmethylidene, arylethylene; R1, R2 = alkyl, aryl, or hydrocarbyl containing carbonyl, ester, or ether group). Polymerizing 1:1 Me methacrylate and monomethyl mono(methoxycarbonylmethyl) itaconate in xylene and BuOAc in the presence of a peroxide at 120° gave a solution containing 50.2% a copolymer with mol. weight of 22,400, 37 parts of which was mixed with Cu2O 41, TiO2 6, an antisagging agent 2, and xylene 14 parts to form a coating showing good antifouling ability over 18 mo and blister/crack prevention after 24 mo.

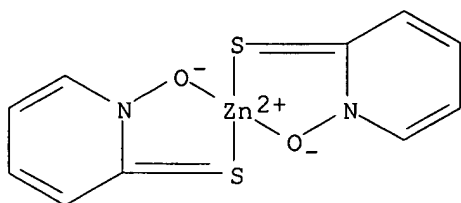
IT 13463-41-7, Zinc pyrithione 28159-98-0,  
2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine  
64359-81-5 154592-20-8, Copper pyrithione

RL: MOA (Modifier or additive use); USES (Uses)

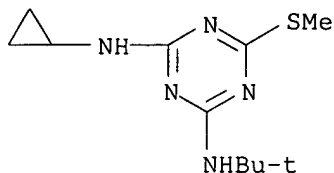
(unsatd. diacid ester-based vinyl resins for antifouling coatings with blister and crack resistance)

RN 13463-41-7 CAPLUS

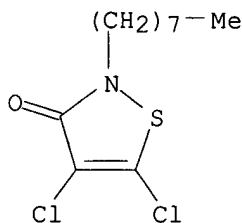
CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
(9CI) (CA INDEX NAME)



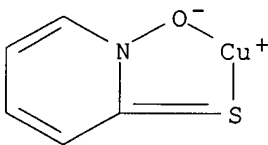
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 26 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:754117 CAPLUS

DOCUMENT NUMBER: 135:305261

TITLE: Antifouling coating compositions, their films, and antifouling method for ships or underwater structures therewith

INVENTOR(S): Ono, Masashi; Onishi, Yasuyuki

PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

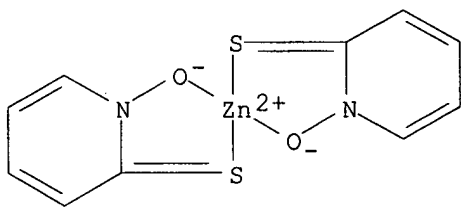
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

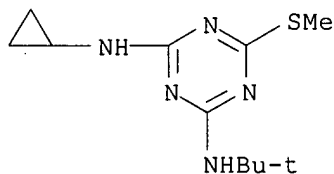
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

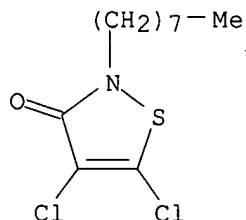
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2001288398	A2	20011016	JP 2000-101491	20000403
PRIORITY APPLN. INFO.:				JP 2000-101491	20000403
AB	Title compns. contain (a) metal unsatd. carboxylate-containing polymers and (b) composite powders which are powdered Cu and/or inorg. Cu compds. coated with particulate and/or laminar CuO. A composition containing a 40% Et acrylate-methacrylic acid-Me methacrylate copolymer basic Zn salt-containing solution 40, fine CuO particle-coated Cu <sub>2</sub> O powders 35, Zn pyrithione 3, and PK Boron 3% showed good storage stability at room temperature for 3 mo and antifouling ability over 1 yr.				
IT	13463-41-7, Zinc pyrithione 28159-98-0, 2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine 64359-81-5, 4,5-Dichloro-2-n-octyl-4-isothiazolin-3-one 154592-20-8, Copper pyrithione				
RL:	MOA (Modifier or additive use); USES (Uses) (CuO-coated Cu (compound) composite- and metal unsatd. carboxylate resin-containing antifouling coatings with storage stability)				
RN	13463-41-7 CAPLUS				
CN	Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS <sub>2</sub> ]-, (T-4)- (9CI) (CA INDEX NAME)				



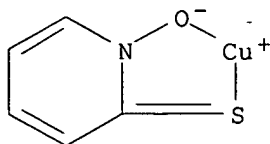
RN 28159-98-0 CAPLUS  
CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS<sub>2</sub>]- (9CI)  
(CA INDEX NAME)



L29 ANSWER 27 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:706210 CAPLUS

DOCUMENT NUMBER: 135:340403

TITLE: The environmental fate and behaviour of antifouling paint booster biocides: A review

AUTHOR(S): Thomas, K. V.

CORPORATE SOURCE: Centre for Environment, Fisheries and Aquaculture Science, CEFAS Burnham Laboratory, Burnham on Crouch, CM0 8HA, UK

SOURCE: Biofouling (2001), 17(1), 73-86

CODEN: BFOUEC; ISSN: 0892-7014

PUBLISHER: Harwood Academic Publishers

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with refs. Antifouling paint booster biocides are a group of organic compds. added to antifouling paints to improve their efficacy. They have become prevalent since the requirement for alternative antifouling paints formulations for small boats (<25m). This need followed a ban on the use of triorganotin biocides in antifouling paints for small boats, in the late 1980's. Worldwide, around eighteen compds. are currently used as antifouling biocides, viz. benzmethylanide, chlorothalonil, copper pyrithione, dichlofluanid, diuron, fluorofolpet, Irgarol 1051, Sea-Nine 211, Mancozeb, Polyphase, pyridine-triphenylborane, TCMS (2,3,5,6-tetrachloro-4-methylsulfonyl pyridine), TCMTB [2-(thiocyanomethylthio)benzothiazole], Thiram, tolylfluanid, zinc pyrithione (ZPT), ziram and Zineb. Any booster biocide released into the environment is subjected to a complex set of processes. These processes include transport mechanisms, transformation, degradation, cross media partitioning, and bioaccumulation. This paper reviews the fate and behavior data currently available in the public domain concerning antifouling paint booster biocides.

IT 13463-41-7, Zinc pyrithione 28159-98-0, Irgarol 1051

55406-53-6, Polyphase 64359-81-5, Sea-Nine 211

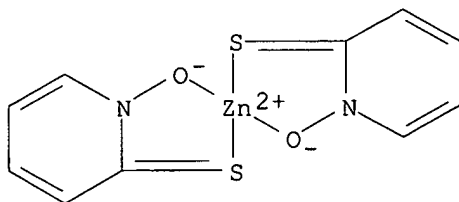
154592-20-8, Copper pyrithione

RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)

(environmental fate and behavior of antifouling paint booster biocides)

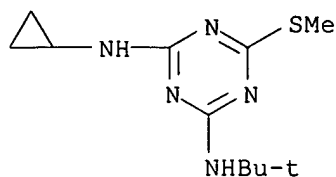
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)

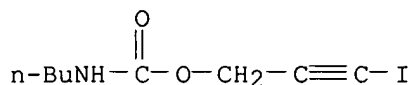


RN 28159-98-0 CAPLUS

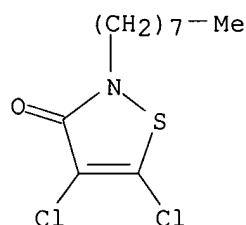
CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



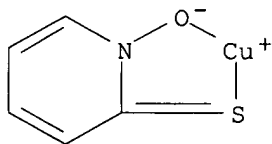
RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 28 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:578597 CAPLUS  
 DOCUMENT NUMBER: 135:124156  
 TITLE: Bactericide combinations in detergents  
 INVENTOR(S): Elsmore, Richard; Houghton, Mark Phillip  
 PATENT ASSIGNEE(S): Robert McBride Ltd., UK  
 SOURCE: Brit. UK Pat. Appl., 53 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2354771	A1	20010404	GB 1999-23253	19991001



PRIORITY APPLN. INFO.:

GB 1999-23253

19991001

AB The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Creduret 50 (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5, detergent enzyme savingase 0.2, and bactericide Pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing reduction activity after contact 2.

IT 886-50-0 1121-30-8 1121-31-9 2682-20-4

3696-28-4 3811-73-2 4299-07-4

7287-19-6 13463-41-7 14915-37-8

22936-75-0 26172-55-4 26530-03-0

26530-20-1 28159-98-0 43143-11-9

55406-53-6 55965-84-9 64359-81-5

82633-79-2

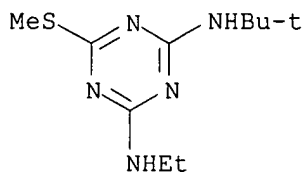
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);

BIOL (Biological study); USES (Uses)

(bactericide combinations in detergents)

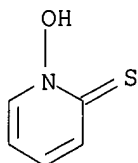
RN 886-50-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)- (9CI) (CA INDEX NAME)



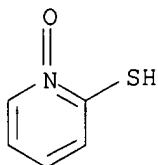
RN 1121-30-8 CAPLUS

CN 2(1H)-Pyridinethione, 1-hydroxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



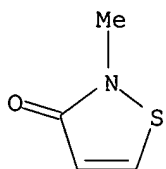
RN 1121-31-9 CAPLUS

CN 2-Pyridinethiol, 1-oxide (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

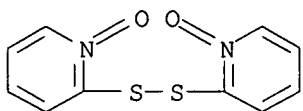


RN 2682-20-4 CAPLUS

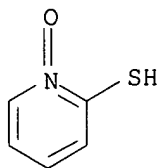
CN 3(2H)-Isothiazolone, 2-methyl- (9CI) (CA INDEX NAME)



RN 3696-28-4 CAPLUS  
 CN Pyridine, 2,2'-dithiobis-, 1,1'-dioxide (9CI) (CA INDEX NAME)

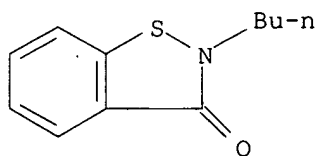


RN 3811-73-2 CAPLUS  
 CN 2-Pyridinethiol, 1-oxide, sodium salt (8CI, 9CI) (CA INDEX NAME)

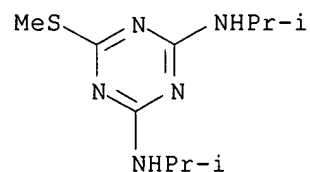


● Na

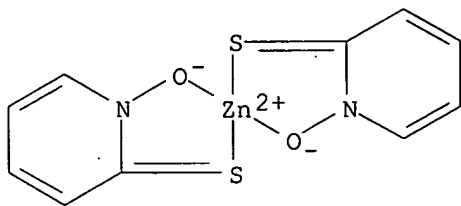
RN 4299-07-4 CAPLUS  
 CN 1,2-Benzisothiazol-3(2H)-one, 2-butyl- (9CI) (CA INDEX NAME)



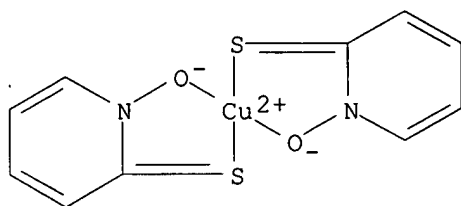
RN 7287-19-6 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N,N'-bis(1-methylethyl)-6-(methylthio)- (9CI)  
 (CA INDEX NAME)



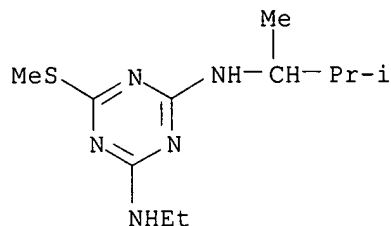
RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)



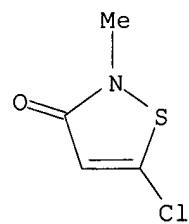
RN 14915-37-8 CAPLUS  
 CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



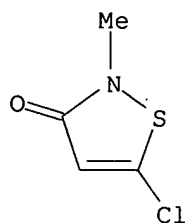
RN 22936-75-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-(1,2-dimethylpropyl)-N'-ethyl-6-(methylthio)-  
 (9CI) (CA INDEX NAME)



RN 26172-55-4 CAPLUS  
 CN 3(2H)-Isothiazolone, 5-chloro-2-methyl- (9CI) (CA INDEX NAME)

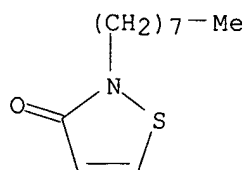


RN 26530-03-0 CAPLUS  
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 NAME)

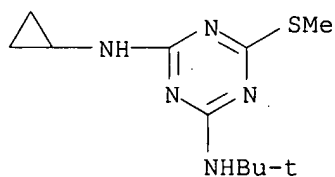


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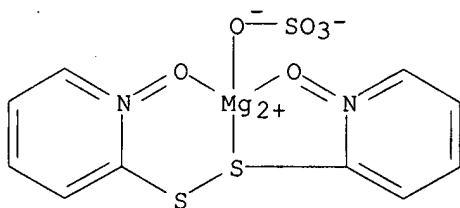
RN 26530-20-1 CAPLUS  
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



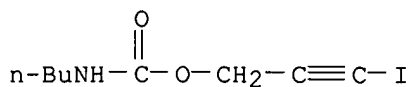
RN 28159-98-0 CAPLUS  
CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 43143-11-9 CAPLUS  
CN Magnesium, [2,2'-(dithio-κS)bis[pyridine] 1,1'-di(oxide-κO)][sulfato(2-)-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



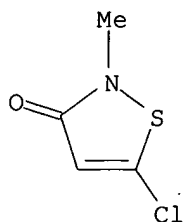
RN 55965-84-9 CAPLUS

CN 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

CRN 26172-55-4

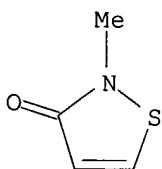
CMF C4 H4 Cl N O S



CM 2

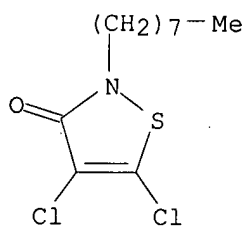
CRN 2682-20-4

CMF C4 H5 N O S



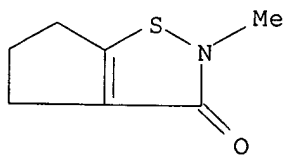
RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 82633-79-2 CAPLUS

CN 2H-Cyclopent[d]isothiazol-3(4H)-one, 5,6-dihydro-2-methyl- (9CI) (CA INDEX NAME)



TITLE: Antifouling Paint Booster Biocides in the UK Coastal Environment and Potential Risks of Biological Effects  
 AUTHOR(S): Thomas, K. V.; Fileman, T. W.; Readman, J. W.; Waldock, M. J.  
 CORPORATE SOURCE: CEFAS Burnham Laboratory, Centre for Environment, Fisheries and Aquaculture Science (CEFAS), Burnham on Crouch, Essex, CM0 8HA, UK  
 SOURCE: Marine Pollution Bulletin (2001), 42(8), 677-688  
 CODEN: MPNBAZ; ISSN: 0025-326X  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB In the yachting sector of the UK antifouling market, organic biocides are commonly added to antifouling preps. to boost performance. Few data presently exist for concns. of these compds. in UK waters. The concns. of tributyltin (TBT) and 8 booster biocides were measured before and during the 1998 yachting season. The Crouch Estuary, Essex, Sutton Harbor, Plymouth and Southampton Water were chosen as representative study sites for comparison with previous surveys of TBT concns. Diuron and Irgarol 1051 were the only organic booster biocides found at concns. above the limits of detection. Diuron was measured at the highest concns., while detectable concns. of both Irgarol 1051 and diuron were determined in areas of high yachting activity (e.g. mooring areas and marinas). Maximum measured values were 1421 and 6740 ng/L, resp. Lower concns. of both compds. were found in open estuarine areas, although non-antifouling contributions of diuron may contribute to the overall inputs to estuarine systems. TBT was below or near the environmental quality standard (EQS) of 2 ng/L for all samples collected from estuarine areas frequented by pleasure craft alone, but with much higher concns. measured in some marinas, harbors and in areas frequented by large com. vessels. Using the limited published environmental fate and toxicity data available for antifouling booster biocides, a comparative assessment to evaluate the risk posed by these compds. to the aquatic environment is described. TBT still exceeds risk quotients by the greatest margins, but widespread effects due to Irgarol 1051 and less so diuron cannot be ruled out (particularly if use patterns change) and more information is required to provide a robust risk assessment.

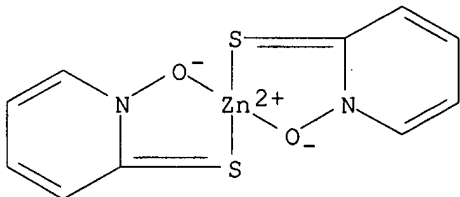
IT 13463-41-7, Zinc pyrithione 28159-98-0, Irgarol 1051  
 64359-81-5, Kathon 5287

RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(antifouling paint booster biocides in UK coastal environment and potential risks of biol. effects)

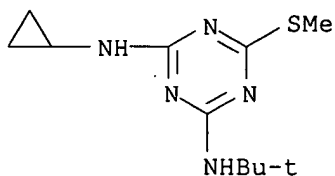
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)

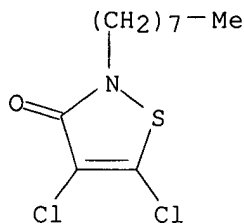


RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 30 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:270551 CAPLUS

DOCUMENT NUMBER: 134:297281

TITLE: Antifouling coating compositions, their films, coating process therewith, and ships or underwater structures coated therewith

INVENTOR(S): Tsuboi, Makoto; Yoshikawa, Eiichi; Yuki, Yasuhiro; Kozono, Yukio; Nakamura, Naoya

PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

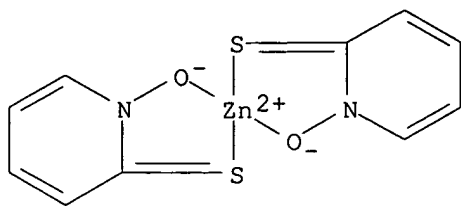
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001106962	A2	20010417	JP 1999-282778	19991004
PRIORITY APPLN. INFO.:			JP 1999-282778	19991004

AB Title compns. contain (a) Cu and/or Cu compds., (b) (meth)acrylate ester polymers, and (c) CH<sub>2</sub>:CHOR (R = alkyl or cycloalkyl) vinyl ether-based polymers. A composition containing 30:70 Me methacrylate-triisopropylsilyl acrylate copolymer, Lutonal A 25, Cu pyrithione, and Cu<sub>2</sub>O gave a film with antifouling ability of 4:1 to a film prepared from similar composition without the Lutonal A 25.

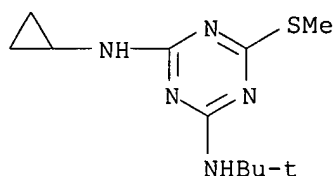
IT **13463-41-7**, Zinc pyrithione **28159-98-0**  
**64359-81-5**, 4,5-Dichloro-2-n-octyl-4-isothiazolin-3-one  
**154592-20-8**, Copper pyrithione  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (Cu (compound)- and poly(vinyl ether)-containing acrylic antifouling coatings)

RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)- (9CI) (CA INDEX NAME)



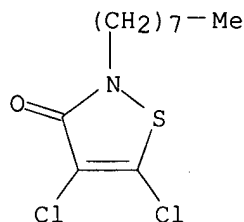
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



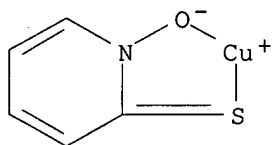
RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS

CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
(CA INDEX NAME)



L29 ANSWER 31 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:220258 CAPLUS

DOCUMENT NUMBER: 134:253813

TITLE: Silyl (meth)acrylate copolymer-based antifouling marine coating composition

INVENTOR(S): Tsuboi, Makoto; Yoshikawa, Eiichi; Arimura, Hidetaka; Kozono, Sachio; Nakamura, Naoya

PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:



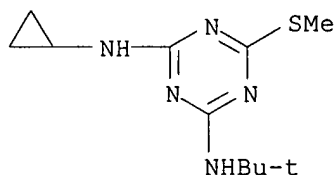
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001081147	A2	20010327	JP 1999-257291	19990910
PRIORITY APPLN. INFO.:			JP 1999-257291	19990910

AB Title antifouling coating composition comprises a copolymer composed of (A) silyl (meth)acrylate units of  $\text{CH}_2\text{CR}_1(\text{COOSiR}_2\text{R}_3\text{R}_4)$  [ $\text{R}_1$ : H, Me;  $\text{R}_2$ - $\text{R}_4$ : alkyl, (substituted) cycloalkyl, (substituted) Ph] 20-80, (B) polyoxyalkylene (meth)acrylate units of  $\text{CH}_2\text{CR}_5[\text{COO}(\text{R}_6\text{O})\text{nR}_7]$  [ $\text{R}_5$ : H, Me;  $\text{R}_6$ : alkylene;  $\text{R}_7$ : alkyl, (substituted) cycloalkyl, (substituted) Ph; n: 26-100] 0.01-40, and (C) other unsatd. monomers 5-79.99 wt% [(A) + (B) + (C) = 100], wherein the weight average mol. weight measured by gel permeation chromatog. is  $\leq 200,000$ . Thus, 26 parts of a copolymer, prepared from triisopropylsilyl methacrylate, Me methacrylate, and Me polyoxyethylene methacrylate were mixed with  $\text{TiO}_2$  2,  $\text{Cu}_2\text{O}$  43,  $\text{ZnO}$  6, and copper pyrithione 3 parts, to give an antifouling coating.

IT **28159-98-0**, 2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine **64359-81-5**, 4,5-Dichloro-2-n-octyl-4-isothiazolin-3-one  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antifouling agent; preparation of silyl (meth)acrylate copolymer-based antifouling marine coating composition)

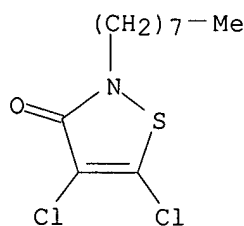
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS

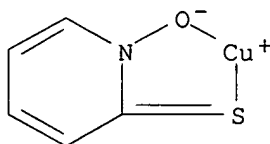
CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



IT **154592-20-8**, Copper pyrithione  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (inorg.; preparation of silyl (meth)acrylate copolymer-based antifouling marine coating composition)

RN 154592-20-8 CAPLUS

CN Copper, [1-(hydroxy- $\kappa$ O)-2(1H)-pyridinethionato- $\kappa$ S2]- (9CI)  
 (CA INDEX NAME)



L29 ANSWER 32 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:107947 CAPLUS

DOCUMENT NUMBER: 134:149081

TITLE: Antifouling coating compositions, their films, ships or underwater structures there with and antifouling method therewith

INVENTOR(S): Ono, Masashi; Onishi, Yasuyuki

PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001040274	A2	20010213	JP 2000-140598	20000512
PRIORITY APPLN. INFO.:			JP 1999-145593	A 19990525

AB Title comps. contain (a) polymers containing unsatd. acid metal salts, (b) Cu and/or inorg. Cu compds., and (c) metals having a redox voltage of lower than that of Cu. A composition containing Et acrylate-methacrylic acid-Me methacrylate copolymer ZnO salt, CuO, Zn powders, and Cu pyrithione (I) showed a good 0% bioorganism attachment over 1 yr, vs., 10-25% for a similar composition without the powdered Zn and I.

IT 13463-41-7, Zinc pyrithione 28159-98-0

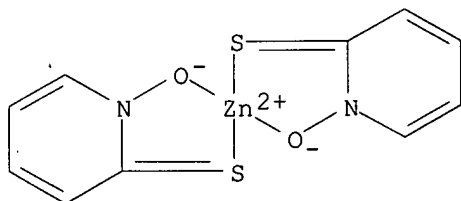
64359-81-5 154592-20-8, Copper pyrithione

RL: MOA (Modifier or additive use); USES (Uses)

(powdered Zn- and Cu (compound)-containing acrylic resin salt comps. for antifouling coatings)

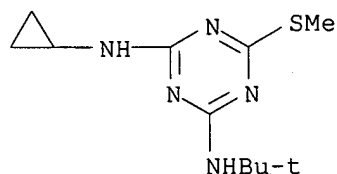
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



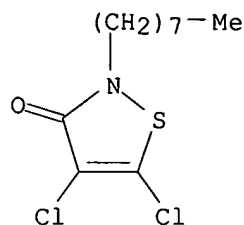
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)

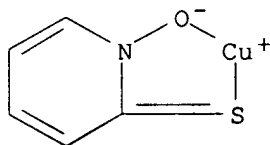


RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)

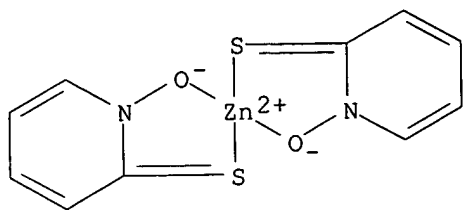


RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)

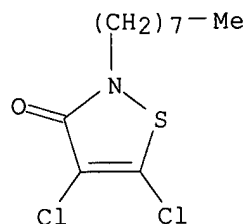


L29 ANSWER 33 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:58495 CAPLUS  
 DOCUMENT NUMBER: 134:111660  
 TITLE: Antifouling coating compositions and antifouling treatments of substrates  
 INVENTOR(S): Masaoka, Shigeru; Matsuoka, Iwao  
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

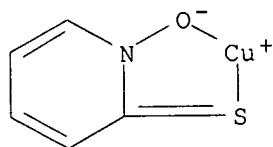
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001019848	A2	20010123	JP 1999-194692	19990708
PRIORITY APPLN. INFO.:			JP 1999-194692	19990708
AB Antifouling coatings contain polyoxyalkylen-organopolysiloxanes having HLBeo 1-2.5 based on ethylene oxide and HLBpo 1-10 based on propylene oxide. Thus, a coating material contained Cu suboxide 25, 2-pyridinethiol-1 oxide Cu salt 2, a precipitation inhibitor 3, trimethylsilyl-terminated polydimethylsiloxane having polyoxyethylene oxypropylene Me ether side chains having HLBeo 2.3 and HLBpo 2.4 4, ACP 450 16, and xylene 50 parts.				
IT 13463-41-7, Zinc pyrithione 64359-81-5, 4,5-Dichloro-2-octyl-4-isothiazolin-3-one 154592-20-8, 2-Pyridinethiol, 1-oxide, copper salt 321343-68-4				
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (antifouling coating compns. containing polyoxyalkylene polysiloxanes)				
RN 13463-41-7 CAPLUS				
CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)- (9CI) (CA INDEX NAME)				



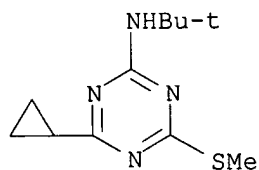
RN 64359-81-5 CAPLUS  
CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
(CA INDEX NAME)



RN 321343-68-4 CAPLUS  
CN 1,3,5-Triazin-2-amine, 4-cyclopropyl-N-(1,1-dimethylethyl)-6-(methylthio)-  
(9CI) (CA INDEX NAME)

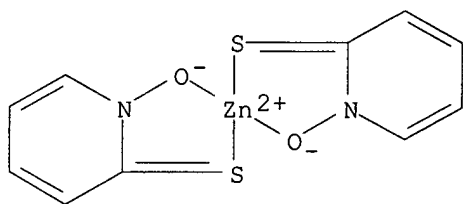


L29 ANSWER 34 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2000:725406 CAPLUS  
DOCUMENT NUMBER: 133:262648  
TITLE: Microbicidal composition for coatings  
INVENTOR(S): Lindner, Wolfgang  
PATENT ASSIGNEE(S): Troy Chemie G.m.b.H., Germany  
SOURCE: PCT Int. Appl., 36 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

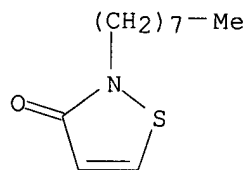
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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 WO 2000059305      A1      20001012      WO 2000-EP2823      20000330  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,  
 CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,  
 ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,  
 LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,  
 SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,  
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,  
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

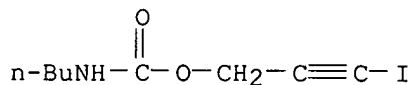
PRIORITY APPLN. INFO.:      DE 1999-19915055      A 19990401  
 AB The invention relates to a microbicidal composition which comprises: (a)  
 2-methoxycarbonylaminobenzimidazole or thiabendazole; (b)  
 octylisothiazolin-3-one or 3-iodopropynyloxy N-butylcarbamate; (c)  
 2-mercaptopyridine N-oxide zinc salt; and (d) an N-aryl-N',N'-dimethylurea  
 derivative or a chlorine-free triazine derivative from the class of  
 2-methylmercaptodialkylamino-sym-triazines. The invention also relates to  
 coatings containing the above compns, such as for roofs and walls.  
 IT **13463-41-7D**, mixts. containing **26530-20-1D**, mixts. containing  
**55406-53-6D**, mixts. containing **298197-38-3**  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)  
 (microbicidal coating composition)  
 RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)



RN 26530-20-1 CAPLUS  
 CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



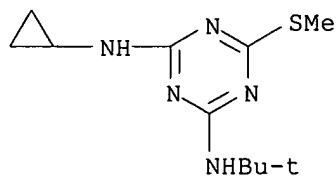
RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 298197-38-3 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-,  
 mixt. with N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)-1,3,5-  
 triazine-2,4-diamine, methyl 1H-benzimidazol-2-ylcarbamate and  
 2-octyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

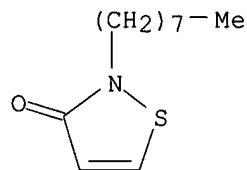
CM 1

CRN 28159-98-0  
CMF C11 H19 N5 S



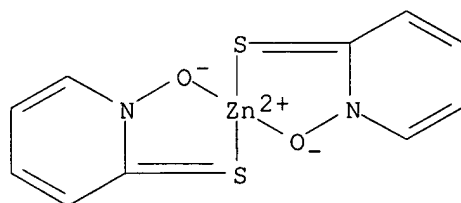
CM 2

CRN 26530-20-1  
CMF C11 H19 N O S



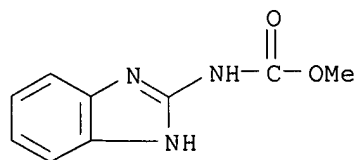
CM 3

CRN 13463-41-7  
CMF C10 H8 N2 O2 S2 Zn  
CCI CCS



CM 4

CRN 10605-21-7  
CMF C9 H9 N3 O2



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

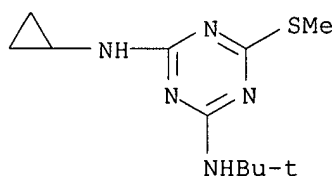
ACCESSION NUMBER: 2000:672877 CAPLUS  
 DOCUMENT NUMBER: 133:233925  
 TITLE: Antifouling compositions and coatings containing copper glass and metal pyrithiones, and their application  
 INVENTOR(S): Masaoka, Shigeru; Ohtawa, Yasuo  
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000264804	A2	20000926	JP 1999-69486	19990316
PRIORITY APPLN. INFO.:			JP 1999-69486	19990316

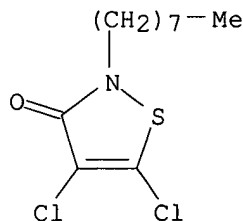
AB Title comps. contain soluble Cu glass and metal pyrithiones. The comps. show low toxicity and long-lasting antifouling effect and are useful for coatings for marine constructions, ships, fish nets, and fishing equipments. An antifouling coating comprised soluble glass (comprising SiO<sub>2</sub> 7.7, Al<sub>2</sub>O<sub>3</sub> 0.1, Na<sub>2</sub>O 5.9, B<sub>2</sub>O<sub>3</sub> 28.8, Cu<sub>2</sub>O 53.3, and ZnO 4.2 weight parts) 25, Cu pyrithione 5, Pliolite S 5B (SBR) 5, rosin 10, tricresyl phosphate 5, red iron oxide 5, ZnO 10, bentonite 1, and xylene 34 weight parts. The coating was applied to a PVC plate to prevent adhesion of marine organisms for 18 mo.

IT **28159-98-0**, 2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine **64359-81-5**, 4,5-Dichloro-2-octyl-isothiazolin-3-one **154592-20-8**, Copper pyrithione  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (antifouling comps. and coatings containing Cu glass and metal pyrithiones)

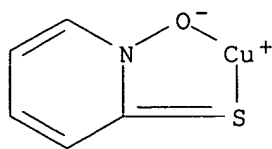
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



L29 ANSWER 36 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:600333 CAPLUS

DOCUMENT NUMBER: 133:178989

TITLE: Antifouling coating compositions, films thereof, ships or underwater structures coated therewith, and fouling prevention of ship bodies or underwater structures

INVENTOR(S): Ono, Masashi; Onishi, Yasuyuki; Tanaka, Hideyuki

PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000234072	A2	20000829	JP 1999-145594	19990525
PRIORITY APPLN. INFO.:			JP 1998-359750	A 19981217

AB The comps. comprise (A) copolymers of unsatd. carboxylic acid Zn or Cu salts and (B) Cu and/or inorg. Cu compds. with average particle size 6-50  $\mu\text{m}$ . Thus, methacrylic acid 8, Me methacrylate 4, and Et acrylate 28 parts were polymerized in a solvent and treated with 4 phr ZnO and 1 phr H<sub>2</sub>O at 120° for 10 h to give a copolymer hydroxy Zn salt solution (A-1). A composition of A-1 (40% solid) 35, chlorinated paraffin 2, ZnO 5, red Fe oxide 2, Cu<sub>2</sub>O (Lolo Tint 97; average 19  $\mu\text{m}$ ) 40, oxidized polyethylene wax 2, fatty amide wax 2, and propylene glycol monomethyl ether 12 parts was applied on a PVC sheet and dried to give a test piece showing no adhesion of marine lives in the sea for  $\geq 6$  mo and good polishing property for long terms.

IT 13463-41-7, Zinc Omadine 28159-98-0, Irgarol 1051

64359-81-5, Sea-Nine 211 154592-20-8, Copper pyrithione

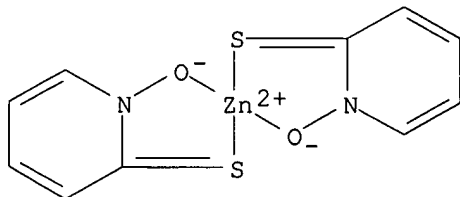
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);

BIOL (Biological study); USES (Uses)

(antifouling marine coating comps. based on zinc or copper salt of unsatd. carboxylic acid copolymers)

RN 13463-41-7 CAPLUS

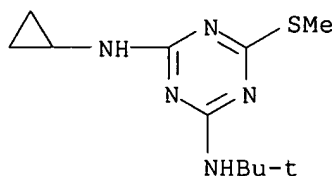
CN Zinc, bis[1-(hydroxy- $\kappa\text{O}$ )-2(1H)-pyridinethionato- $\kappa\text{S}_2$ ]-, (T-4)-(9CI) (CA INDEX NAME)



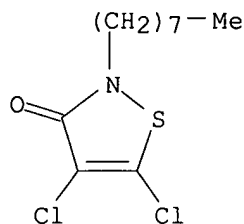
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)

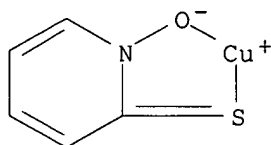




RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)

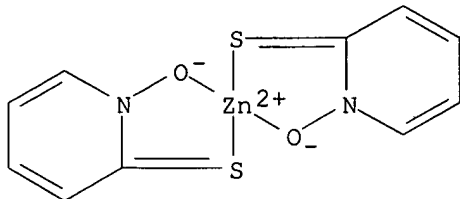


L29 ANSWER 37 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2000:370699 CAPLUS  
 DOCUMENT NUMBER: 133:146143  
 TITLE: Multidimensional risk analysis of antifouling biocides  
 AUTHOR(S): Ranke, Johannes; Jastorff, Bernd  
 CORPORATE SOURCE: UFT - Centre for Environmental Research and  
 Environmental Technology, University of Bremen,  
 Bremen, D-28334, Germany  
 SOURCE: Environmental Science and Pollution Research  
 International (2000), 7(2), 105-114  
 CODEN: ESPLEC; ISSN: 0944-1344  
 PUBLISHER: Ecomed Publishers  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB In order to improve the orientation about the long-term sustainability of  
 the use of the antifouling biocides tributyltin (TBT), copper, Irgarol  
 1051, Sea-Nine 211 and zinc pyrithione, used for the protection against  
 fouling in sea-going ships, the risks posed to the marine biosphere due to  
 their use, are evaluated. The newly presented method of risk anal. uses  
 release rate, spatiotemporal range, bioaccumulation, bioactivity and  
 uncertainty as 5 dimensions of ecotoxicol. risk. For each dimension, a  
 scoring procedure is briefly described. The resulting risk profiles of  
 the antifouling biocides show characteristics of the different substances,  
 but also indicate where further information is required. Application of  
 the method is proposed as a decision support in the integrated development  
 of products, informed purchasing and for regulatory purposes.  
 IT 13463-41-7, Zinc pyrithione 28159-98-0, Irgarol 1051  
 64359-81-5, Sea-Nine 211

RL: POL (Pollutant); OCCU (Occurrence)  
 (multidimensional environmental risk anal. of marine antifouling agents)

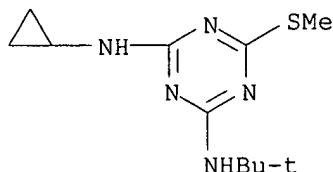
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



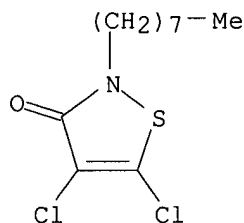
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 38 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:751732 CAPLUS

DOCUMENT NUMBER: 132:13151

TITLE: Antifouling coating compositions for marines or underwater structures

INVENTOR(S): Tanaka, Hideyuki; Ono, Masashi

PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11323209	A2	19991126	JP 1998-340447	19981130
PRIORITY APPLN. INFO.:			JP 1998-63431	A 19980313

OTHER SOURCE(S): MARPAT 132:13151

AB The composition comprises (a) a (meth)acrylate metal salt copolymer (e.g., zinc methacrylate-Me methacrylate-Et acrylate), (b) a triphenylboron-amine complex  $\text{Ph}_3\text{B-NH}_2\text{R}_1$  [ $\text{R}_1 = \text{H}$ , C3-30 alkyl, substituted pyridine, substituted aryl; e.g., triphenylborane-pyridine complex (PK Boron)], optionally (c) chlorinated paraffin, (d) zinc oxide and (e) an other antifouling agent (e.g. Cu rhodanide).

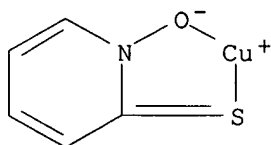
IT **154592-20-8**, 2-Pyridinethiol-1-oxide copper salt

RL: MOA (Modifier or additive use); USES (Uses)

(Copper Pyrithione, antifouling agent; antifouling coating compns. for marines or underwater structures)

RN 154592-20-8 CAPLUS

CN Copper, [1-(hydroxy- $\kappa\text{O}$ )-2(1H)-pyridinethionato- $\kappa\text{S}_2$ ]- (9CI)  
(CA INDEX NAME)



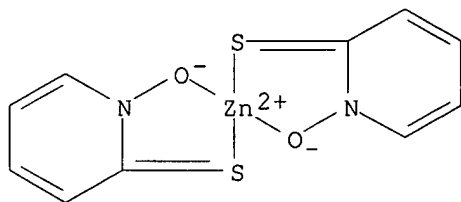
IT **13463-41-7**, Zinc pyrithione **28159-98-0**,  
2-Methylthio-4-tert-butylamino-6-cyclopropylamino-S-triazine  
**64359-81-5**, Sea-Nine 211

RL: MOA (Modifier or additive use); USES (Uses)

(antifouling agent; antifouling coating compns. for marines or underwater structures)

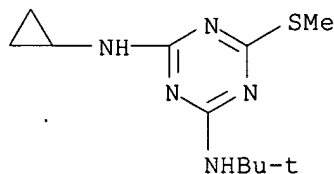
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy- $\kappa\text{O}$ )-2(1H)-pyridinethionato- $\kappa\text{S}_2$ ]-, (T-4)-  
(9CI) (CA INDEX NAME)



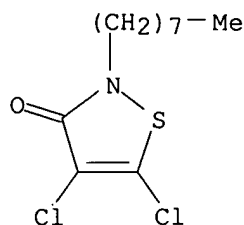
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 39 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:392945 CAPLUS

DOCUMENT NUMBER: 131:40955

TITLE: Controlled-release compositions containing agricultural pesticide, microbicide or antifouling agent incorporated into metal oxide glass

INVENTOR(S): Ghosh, Tirthankar; Nungesser, Edwin Hugh

PATENT ASSIGNEE(S): Rohm and Haas Company, USA

SOURCE: Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 922386	A2	19990616	EP 1998-309692	19981125
EP 922386	A3	20000126		
EP 922386	B1	20040204		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6090399	A	20000718	US 1998-189479	19981110
AU 9895159	A1	19990701	AU 1998-95159	19981201
AU 761076	B2	20030529		
SG 71879	A1	20000418	SG 1998-5360	19981208
BR 9805326	A	20000314	BR 1998-5326	19981209
JP 11263702	A2	19990928	JP 1998-352346	19981211
CN 1232610	A	19991027	CN 1998-123093	19981211
PRIORITY APPLN. INFO.:			US 1997-69243P	P 19971211

AB Disclosed are controlled-release compns. containing biol. active compds. incorporated into metal oxide glass having a porous matrix which is prepared by polymerizing one or more metal alkoxide monomers, optionally in the presence of a second metal alkoxide monomer. These compns. may be directly incorporated into the locus to be protected or may be applied to a structure in a coating. Thus, tetraethoxy orthosilicate and methyltriethoxy orthosilicate (mole ratio 4:1), 4,5-dichloro-2-n-octyl-3-isothiazolone (5% by weight of the final product), and water (mole ratio of alkoxide monomers to water 1:2) were combined in a flask and homogenized by adding methanol or ethanol while stirring; then, 8-10 g of 0.01N HCl per mol of metal alkoxide monomer was added to the reaction mixture, which was allowed to polymerize at room temperature for 3-60 days to give a solid organometallic oxide glass containing the biol. active compound. The cumulative percentages of 4,5-dichloro-2-n-octyl-3-isothiazolone released were 5, 30, 41, 50 and 64% by weight in 0, 0.5, 2, 31, and 144 h.

IT **13463-41-7**, Zinc 2-pyridinethiol-1-oxide **26530-20-1**, 2-n-Octyl-3-isothiazolone **82633-79-2**

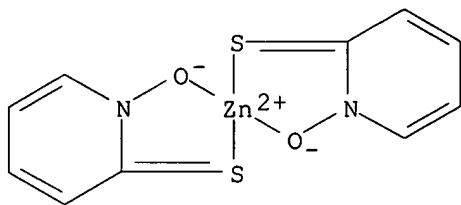
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(controlled-release compns. containing agricultural pesticide, microbicide or antifouling agent incorporated into metal oxide glass)

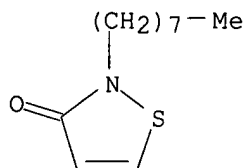
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-

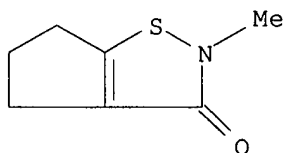
(9CI) (CA INDEX NAME)



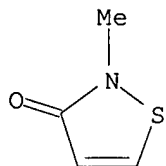
RN 26530-20-1 CAPLUS  
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



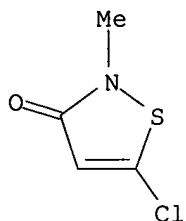
RN 82633-79-2 CAPLUS  
CN 2H-Cyclopent[d]isothiazol-3(4H)-one, 5,6-dihydro-2-methyl- (9CI) (CA INDEX NAME)



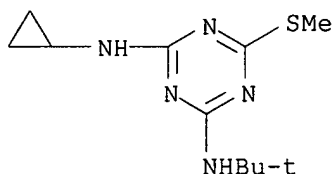
IT 2682-20-4, 2-Methyl-3-isothiazolone 26172-55-4  
28159-98-0, 2-(Methylthio)-4-tert-butylamino-6-(cyclopropylamino)-  
s-triazine 55406-53-6, 3-Iodo-2-propynyl butyl carbamate  
64359-81-5, 4,5-Dichloro-2-n-octyl-3-isothiazolone  
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or  
chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(controlled-release compns. containing agricultural pesticide, microbicide  
or antifouling agent incorporated into metal oxide glass)  
RN 2682-20-4 CAPLUS  
CN 3(2H)-Isothiazolone, 2-methyl- (9CI) (CA INDEX NAME)



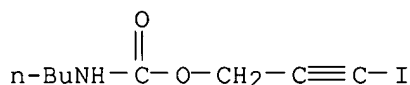
RN 26172-55-4 CAPLUS  
CN 3(2H)-Isothiazolone, 5-chloro-2-methyl- (9CI) (CA INDEX NAME)



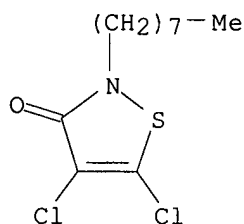
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 40 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:156789 CAPLUS  
 DOCUMENT NUMBER: 130:253783  
 TITLE: Tin-free antifouling coating compositions, cured films thereof, fouling control of ship bodies therewith, and ships coated therewith  
 INVENTOR(S): Tanaka, Hideyuki; Tatsuno, Yoichi  
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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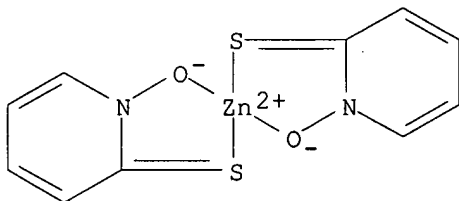
JP 11061002                      A2            19990305            JP 1997-231445                      19970827  
 PRIORITY APPLN. INFO.:                      JP 1997-231445                      19970827

AB The comps. with good adhesion and crack resistance comprise (A) film-forming resins not containing Sn, (B) chlorinated products of ethylene-vinyl acetate copolymer (I) or its partial hydrolyzates, and (C) antifouling agents. Thus, chlorinated I (Superchlone B) 7.5, rosin WW 10, vinyl chloride-vinyl iso-Bu ether copolymer (Laroflex MP 15) 5, ZnO 5, phthalocyanine blue 2.5, Ti White 5, Cu<sub>2</sub>O 40, 2,4,5,6-tetrachloroisophthalonitrile (Nopocide N 96) 3,4,5-dichloro-2-octyl-3(2H)-isothiazoline (Kathon 930) 3.5, polyethylene wax 3, polyamide wax 3, epoxy resin (E 028-90X) 3, xylene 7.2, PhMe 2, and MIBK 3 parts were blended and dispersed to give a composition, which was sprayed on an anticorrosive-coated substrate to give a test piece showing no adhesion of marine lives for 12 mo in the sea.

IT **13463-41-7**, ZPT **28159-98-0**, 2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine **64359-81-5**, Kathon 930 **154592-20-8**, 2-Pyridinethiol 1-oxide copper salt  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)  
 (tin-free antifouling marine coatings with controlled release of antifouling agents)

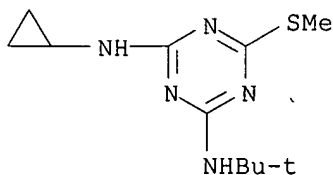
RN **13463-41-7** CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS<sub>2</sub>]-, (T-4)-(9CI) (CA INDEX NAME)



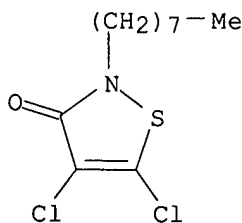
RN **28159-98-0** CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN **64359-81-5** CAPLUS

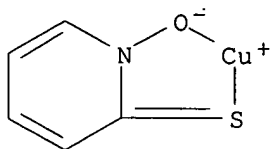
CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN **154592-20-8** CAPLUS

CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS<sub>2</sub>]- (9CI)

(CA INDEX NAME)



L29 ANSWER 41 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:21532 CAPLUS  
DOCUMENT NUMBER: 130:82915  
TITLE: Diphenyldiones as marine antifouling agents  
INVENTOR(S): Willingham, Gary Lewis; Oltman, Linda Marguerite  
PATENT ASSIGNEE(S): Rohm and Haas Company, USA  
SOURCE: U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5853463	A	19981229	US 1998-108767	19980701
PRIORITY APPLN. INFO.:			US 1998-108767	19980701

OTHER SOURCE(S): MARPAT 130:82915

AB Method of inhibiting the growth of marine organisms on a marine structure, by applying onto or into the marine structure with diphenyldiones RC6H4COCOC6H4R1 (R< R1 = H, C1-20 alkyl and halo C1-20 alkyl). These diphenyldiones may be used in conjunction with other antifouling agents and have little or no harmful effects on marine environments. These compds. may be directly incorporated into the marine structure during manufacture, directly applied to the structure, or applied to the structure by means of a coating.

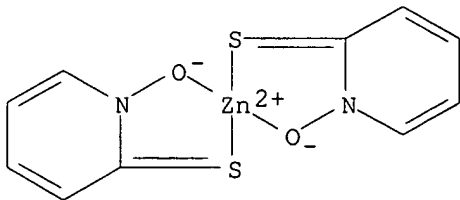
IT **13463-41-7**, Zinc 2-pyridinethiol-1-oxide **28159-98-0**,  
2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine  
**55406-53-6**, 3-Iodo-2-propynylbutyl carbamate **64359-81-5**,  
4,5-Dichloro-2-n-octyl-3-isothiazolone

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)

(marine antifouling agent compns. containing; diphenyldiones as marine antifouling agents having little or no harmful effects on marine environments.)

RN 13463-41-7 CAPLUS

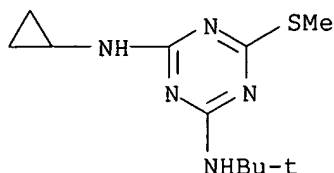
CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
(9CI) (CA INDEX NAME)



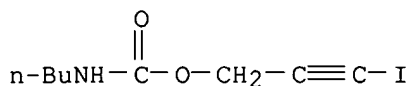
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)

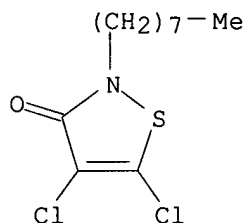




RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 42 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1998:543098 CAPLUS  
 DOCUMENT NUMBER: 129:176163  
 TITLE: Triphenylboron-containing polymers and their use as marine antifouling agents  
 INVENTOR(S): Shimada, Akira; Kohara, Masanori; Shibuya, Yoshifumi  
 PATENT ASSIGNEE(S): Yoshitomi Fine Chemicals, Ltd., Japan  
 SOURCE: PCT Int. Appl., 45 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9833829	A1	19980806	WO 1998-JP375	19980128
W: CN, JP, KR, NO, SG, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 2002161115	A2	20020604	JP 1997-259897	19970925
PRIORITY APPLN. INFO.:			JP 1997-16694	A 19970130
			JP 1997-259897	A 19970925

OTHER SOURCE(S): MARPAT 129:176163  
 AB Title polymers have repeating units of CR<sub>2</sub>R<sub>3</sub>CR<sub>1</sub>CH<sub>2</sub>NH<sub>2</sub>BPh<sub>3</sub> or CH<sub>2</sub>CHNH<sub>2</sub>BPh<sub>3</sub> (R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> = H or C1-4 alkyl) and weight-average mol. weight of 1,000-1,000,000, and are useful as antifouling agents for aquatic foulings. The polymers function not only as the active ingredients but as binders, and have less influence on the environment. Thus, an antifouling agent composition comprising poly(allylamine)-triphenylboron complex (preparation given) 5,

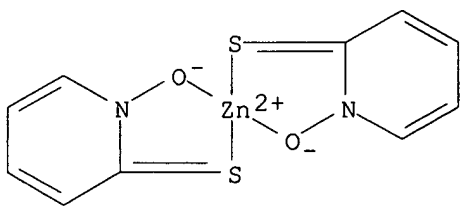
acrylic resin 30, and xylene 65% was applied on Tetron (polyester) fish net, which was kept in seawater for 4 mo giving no biofouling.

IT 13463-41-7, Bis(2-pyridinethiol 1-oxide)zinc 14915-37-8,  
Bis(2-pyridinethiol 1-oxide)copper 28159-98-0,  
2-(tert-Butylamino)-4-(cyclopropylamino)-6-(methylthio)-1,3,5-triazine  
55406-53-6, 3-Iodo-2-propynyl butylcarbamate 64359-81-5,  
4,5-Dichloro-2-n-octyl-3-isothiazolone  
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);  
BIOL (Biological study); USES (Uses)  
(addnl. antifouling agent; preparation of triphenylboron-containing  
polymers for

marine antifouling agents)

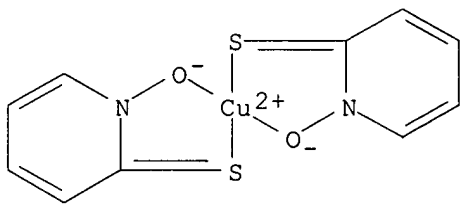
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
(9CI) (CA INDEX NAME)



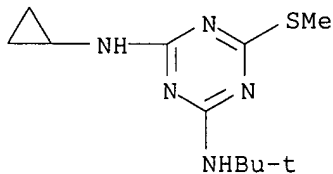
RN 14915-37-8 CAPLUS

CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
(CA INDEX NAME)



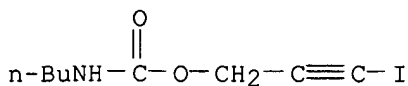
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-  
(methylthio)- (9CI) (CA INDEX NAME)



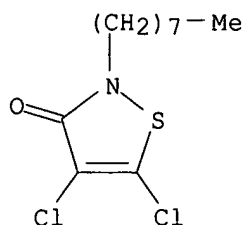
RN 55406-53-6 CAPLUS

CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS

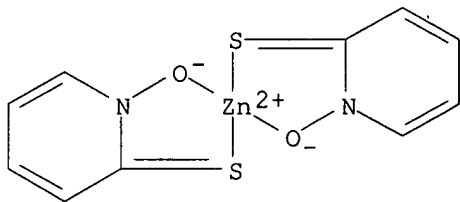
CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



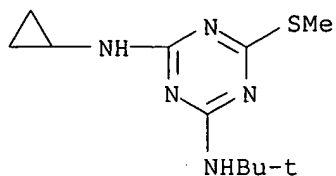
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 43 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1996:748398 CAPLUS  
 DOCUMENT NUMBER: 126:33128  
 TITLE: Hexamethylenebisdithiocarbamic acid salt-based fouling control compositions  
 PATENT ASSIGNEE(S): Rohm and Haas Co., USA  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

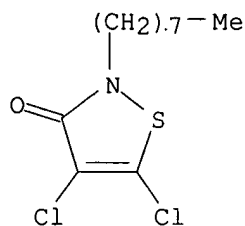
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08259857	A2	19961008	JP 1995-87407	19950320
PRIORITY APPLN. INFO.:			JP 1995-87407	19950320
AB The title compns., useful for cultivation nets, ship bottom, ocean structures, etc., contain hexamethylenebisdithiocarbamic acid metal salts (e.g., of Cu, Zn, Mn, Fe) and optionally stabilizers (e.g., hexamethylenetetramine, thiourea, urea, paraformaldehyde).				
IT 13463-41-7, 2-Pyridinethiol-1-oxide zinc salt 28159-98-0 64359-81-5				
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (hexamethylenebisdithiocarbamic acid salt-based fouling control compns.)				
RN 13463-41-7 CAPLUS				
CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)				



RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



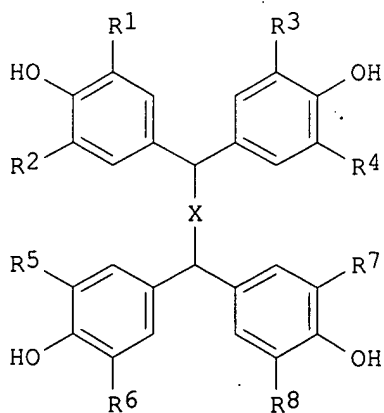
RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 44 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:615167 CAPLUS  
 DOCUMENT NUMBER: 123:9147  
 TITLE: Preparation of inclusion compound of tetrakisphenol  
 with industrial disinfectant  
 INVENTOR(S): Suzuki, Hiroyuki; Ichikawa, Takako  
 PATENT ASSIGNEE(S): Nippon Soda Co, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07010791	A2	19950113	JP 1993-176019	19930623
PRIORITY APPLN. INFO.:			JP 1993-176019	19930623
OTHER SOURCE(S):	MARPAT	123:9147		

GI



I

AB An inclusion compound comprising a alkanetetrakisphenol (host compound) [I; X

= (CH<sub>2</sub>)<sub>n</sub>; n = 0,1,2,3; R<sub>1</sub> - R<sub>8</sub> = H, lower alkyl, halo, lower alkoxy, (un)substituted Ph] and an industrial disinfectant (guest compound) is prepared. A liquid disinfectant may be directly reacted with a powdery host compound I to form an inclusion compound in a high yield with high selectivity without using an organic solvent. Forming an inclusion compound with I, industrial disinfectants, many of which are liqs. and volatile and present handling problem due to skin-irritation and irritative odor, become thermally stable, can be subjected to heat treatment such as injection molding, are changed into a solid for stabilization, reduce the above effects to a human body, and make handling easy. These inclusion compds. find a wide application and for example, are useful as slime controlling agents, additives for cutting agents, and kneading agents for resins, and for antifungal coatings and coatings for the bottom of a ship (no data). Thus, 1.0 g 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane (II) was dissolved in MeOH with warming and stirring and 0.8 g 2,3,5,6-tetrachloro-4-(methanesulfonyl)pyridine (III) (Densil S100, ICI Inc.) was added followed by reacting the resulting mixture at 60° with stirring. The reaction solution was left to stand at room temperature for 30 min and a formed

precipitate was

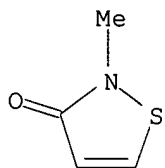
filtered and dried in vacuo at room temperature to give II-III (1:4) inclusion compound

IT **2682-20-4DP**, 2-Methyl-4-isothiazolin-3-one, inclusion compound with alkanetetrakisphenol derivative **3696-28-4DP**, inclusion compound with alkanetetrakisphenol derivative **26172-55-4DP**, 5-Chloro-2-methyl-4-isothiazolin-3-one, inclusion compound with alkanetetrakisphenol derivative **28159-98-ODP**, inclusion compound with alkanetetrakisphenol derivative  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of inclusion compound of alkanetetrakisphenol with industrial disinfectant)

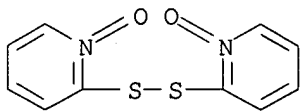
RN 2682-20-4 CAPLUS

CN 3(2H)-Isothiazolone, 2-methyl- (9CI) (CA INDEX NAME)



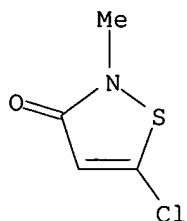
RN 3696-28-4 CAPLUS

CN Pyridine, 2,2'-dithiobis-, 1,1'-dioxide (9CI) (CA INDEX NAME)

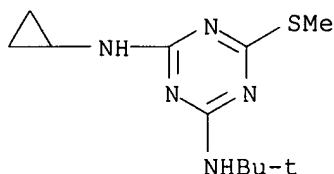


RN 26172-55-4 CAPLUS

CN 3(2H)-Isothiazolone, 5-chloro-2-methyl- (9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



L29 ANSWER 45 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:314140 CAPLUS  
 DOCUMENT NUMBER: 122:83804  
 TITLE: Hydrolyzable polymer binders for antifouling coatings  
 INVENTOR(S): Gerigk, Ursula; Ventur, Dirk  
 PATENT ASSIGNEE(S): Witco GmbH, Germany  
 SOURCE: Ger. Offen., 9 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4242082	A1	19940616	DE 1992-4242082	19921214
GB 2273934	A1	19940706	GB 1993-25108	19931208
GB 2273934	B2	19961211		

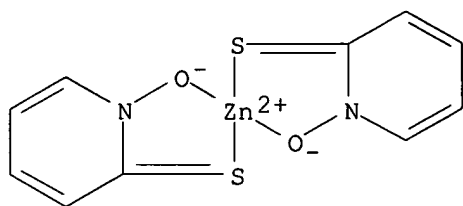
PRIORITY APPLN. INFO.: DE 1992-4242082 A 19921214

AB The binders for marine antifouling coatings are based on ≤80% ethylenically unsatd. monomer and (meth)acrylamide with a quaternary ammonium group-containing substituent on the amide N and may contain cobiocides. The coatings are Sn-free. Thus, Me methacrylate-benzyltrimethylmethacrylamidopropylammonium chloride copolymer (I) was prepared and incorporated into a composition containing Cu<sub>2</sub>O, ZnO, bentonite, and

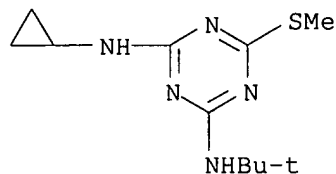
solvent. After 1 yr in seawater, only 20% growth was noted, compared to 80% for a composition containing Me methacrylate-dimethylaminopropylmethacrylamide copolymer in place of I.

IT 13463-41-7, Pyrithione zinc 28159-98-0  
 64359-81-5, 4,5-Dichloro-2-octyl-4-isothiazolin-3-one  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (cobiocide; hydrolyzable polymer binders for antifouling coatings)

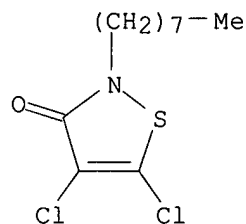
RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)- (9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)

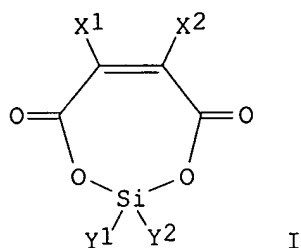


RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L29 ANSWER 46 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1993:562559 CAPLUS  
 DOCUMENT NUMBER: 119:162559  
 TITLE: Antifouling coating compositions  
 INVENTOR(S): Masuoka, Shigeru; Ito, Masayasu; Pponda, Yoshihiro  
 PATENT ASSIGNEE(S): Nippon Oils & Fats Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 05112739	A2	19930507	JP 1991-299887	19911018
PRIORITY APPLN. INFO.: GI			JP 1991-299887	19911018

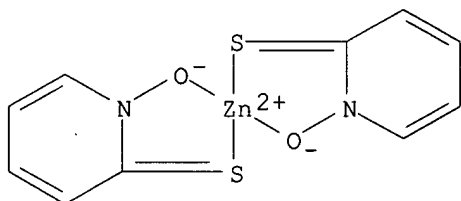


AB Title comps. contain I (co)polymers and/or I-vinyl monomer copolymers and stain-preventing agents [X1-2 = H, Me; Y1-2 = normal alkyl, branched alkyl, cyclic alkyl, alkoxy, (un)substituted Ph, (un)substituted PhO]. Thus, 60 parts I (X1-2 = H, Y1-2 = C4H9) and 40 parts vinyl acetate were polymerized to give a polymer solution, 24 parts of which was mixed with 30 parts Cu2O and 10 parts phenyl(bispyridine)bismuth dichloride to give a composition with good antifouling property.

IT **13463-41-7**, 2-Pyridinethiol-1-oxide zinc salt **28159-98-0**  
**55406-53-6**, 3-Iodo-2-propynylbutylcarbamate **64359-81-5**  
 RL: USES (Uses)  
 (antifouling agents, diorganosilyl-having polymer coatings containing)

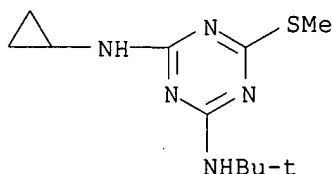
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)- (9CI) (CA INDEX NAME)



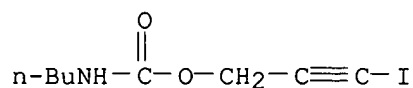
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS

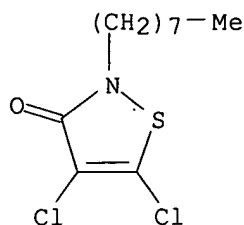
CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



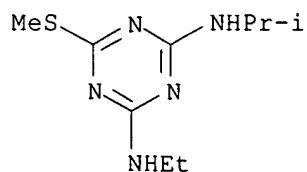
RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)

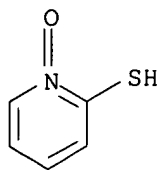




L29 ANSWER 47 OF 47 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1979:485248 CAPLUS  
 DOCUMENT NUMBER: 91:85248  
 TITLE: Screening of selected agricultural and industrial chemicals as wood preservatives  
 AUTHOR(S): Hedley, M. E.; Preston, A. F.; Cross, D. J.; Butcher, J. A.  
 CORPORATE SOURCE: Forest Res. Inst., ROTORUA, N. Z.  
 SOURCE: International Biodeterioration Bulletin (1979), 15(1), 9-18  
 CODEN: IBDBAD; ISSN: 0020-6164  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Forty-nine active ingredients of agricultural and industrial fungicides, insecticides, and herbicides were assessed as wood preservatives against fungal and insect attack. Fungal test blocks 30 + 10 + 5 mm of *Pinus radiata* and *Betula alba* wood were treated to saturation with 1.0% or 0.25% active ingredient. Pine blocks were exposed to the basidiomycete *Coniophora puteana* using a soil-jar technique; *B. alba* blocks were exposed to a natural mycoflora in unsterile soil with conditions adjusted to promote attack by soft-rot organisms. Insect tests were: (1) acute oral toxicity of 1 mg/g body weight of *Prionoplus reticularis* larvae; (2) transfer of *Anobium punctatum* larvae to compressed wood-flour blocks, each containing 5 kg/m<sup>3</sup> of active ingredient, and measurement of larval weight change and mortality after an 8-wk incubation period. Biocidal activity in each test was assessed on a 4-point scale. Noprocide [1897-45-6] and Melprex [2439-10-3] were most effective as both insecticide and fungicide. Skane M-8 [26530-20-1] and Busan 30 [21564-17-0] were highly effective at 0.25% as fungicides but not as insecticides. Padan [15263-52-2] showed high insect toxicity but low fungicidal activity. Zinc omadine [13463-41-7], Milcol [5707-69-7], Timtex [10380-28-6], and Dowicide [53537-62-5] were effective fungicides at 1.0%. Avirosan [12701-69-8], Vitavax [5234-68-4], Terraclor [82-68-8], and Calirus [15310-01-7] were effective against *C. puteana*.  
 IT 834-12-8 3811-73-2 12701-69-8  
 13463-41-7 26530-20-1 43143-11-9  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (fungicidal and insecticidal activity of)  
 RN 834-12-8 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-ethyl-N'-(1-methylethyl)-6-(methylthio)-(9CI) (CA INDEX NAME)



RN 3811-73-2 CAPLUS  
 CN 2-Pyridinethiol, 1-oxide, sodium salt (8CI, 9CI) (CA INDEX NAME)

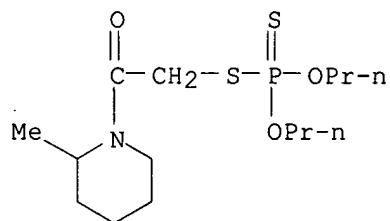


● Na

RN 12701-69-8 CAPLUS  
 CN Phosphorodithioic acid, S-[2-(2-methyl-1-piperidiny1)-2-oxoethyl]  
 O,O-dipropyl ester, mixt. with N-(1,2-dimethylpropyl)-N'-ethyl-6-  
 (methylthio)-1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

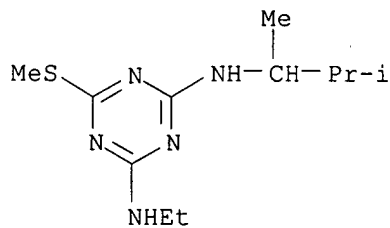
CM 1

CRN 24151-93-7  
 CMF C14 H28 N O3 P S2



CM 2

CRN 22936-75-0  
 CMF C11 H21 N5 S



RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)

L30 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:471844 CAPLUS  
 DOCUMENT NUMBER: 143:28318  
 TITLE: Micronized wood preservative formulations  
 INVENTOR(S): Leach, Robert M.; Zhang, Jun  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S.  
 Ser. No. 821,326.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005118280	A1	20050602	US 2004-970446	20041021
US 2004258767	A1	20041223	US 2004-821326	20040409
PRIORITY APPLN. INFO.:			US 2003-461547P	P 20030409
			US 2003-518994P	P 20031111
			US 2004-821326	A2 20040409
			US 2004-568485P	P 20040506

AB The wood preservative compns. comprising micronized particles. The composition comprises dispersions of micronized metal or metal compds. The wood preservative composition comprises an inorg. component comprising a metal or metal compound and organic biocide. When the composition comprises an inorg. component and an organic biocide, the inorg. component or the organic biocide

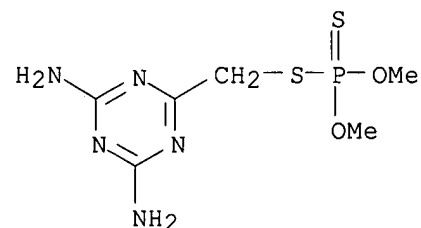
or both are present as micronized particles. When used for preservation of wood, the micronized particles can be observed as uniformly distributed within the wood and there is minimal leaching of the metal and biocide from the wood.

IT 78-57-9, Menazon 2682-20-4 3696-28-4,  
 Dipyrrithione 14915-37-8, Copper omadine 26172-55-4  
 26530-20-1 55406-53-6 55965-84-9, Kathon WT  
 64359-81-5

RL: BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
 (micronized wood preservative formulations comprising inorg. metal compds. and organic biocides)

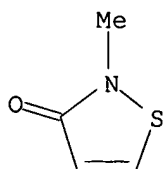
RN 78-57-9 CAPLUS

CN Phosphorodithioic acid, S-[(4,6-diamino-1,3,5-triazin-2-yl)methyl]  
 O,O-dimethyl ester (9CI) (CA INDEX NAME)

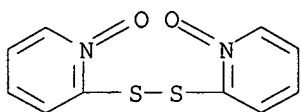


RN 2682-20-4 CAPLUS

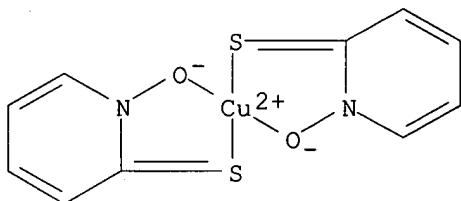
CN 3(2H)-Isothiazolone, 2-methyl- (9CI) (CA INDEX NAME)



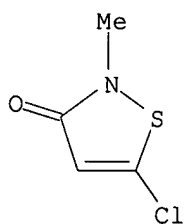
RN 3696-28-4 CAPLUS  
 CN Pyridine, 2,2'-dithiobis-, 1,1'-dioxide (9CI) (CA INDEX NAME)



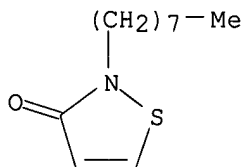
RN 14915-37-8 CAPLUS  
 CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



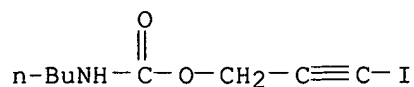
RN 26172-55-4 CAPLUS  
 CN 3(2H)-Isothiazolone, 5-chloro-2-methyl- (9CI) (CA INDEX NAME)



RN 26530-20-1 CAPLUS  
 CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



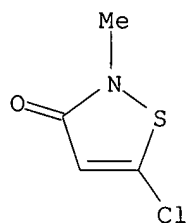
RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 55965-84-9 CAPLUS  
 CN 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

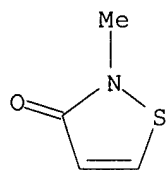
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CRN 26172-55-4  
 CMF C4 H4 Cl N O S

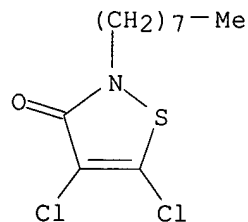


CM 2

CRN 2682-20-4  
 CMF C4 H5 N O S



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L30 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:825127 CAPLUS  
 DOCUMENT NUMBER: 141:320091  
 TITLE: Microbicidal composition  
 INVENTOR(S): Heer, Beat; Tiedtke, Gerhard; Hegarty, Bryan Martin  
 PATENT ASSIGNEE(S): Switz.  
 SOURCE: U.S. Pat. Appl. Publ., 4 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004198713	A1	20041007	US 2004-811518	20040329
JP 2004315507	A2	20041111	JP 2004-82164	20040322
BR 2004000787	A	20050628	BR 2004-787	20040326
EP 1466526	A2	20041013	EP 2004-251945	20040401
EP 1466526	A3	20041124		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

CN 1535581	A	20041013	CN 2004-10033347	20040402
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PRIORITY APPLN. INFO.: US 2003-460925P P 20030407

OTHER SOURCE(S): MARPAT 141:320091

AB A microbicidal composition containing (a) at least one sulfur-containing s-triazine,

(b) at least one pyrithione metal salt, and (c) at least one addnl. microbicide selected from 2-alkyl-4-isothiazolin-3-ones and halopropynyl carbamates is disclosed.

IT 886-50-0 13463-41-7, Zinc pyrithione 26530-20-1  
 28159-98-0 64359-81-5 129348-50-1

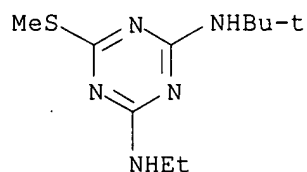
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(microbicidal composition containing an s-triazine, a pyrithione metal salt, and

an alkylisothiazolinone or halopropynyl carbamate)

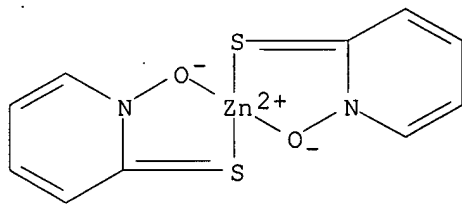
RN 886-50-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-(9CI) (CA INDEX NAME)



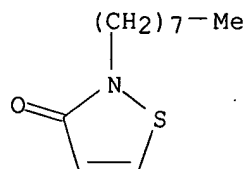
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)

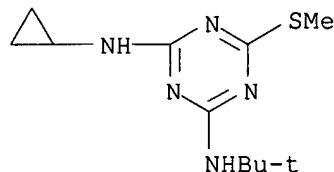


RN 26530-20-1 CAPLUS

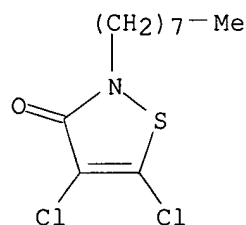
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



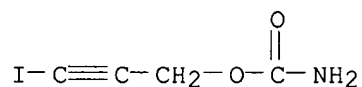
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



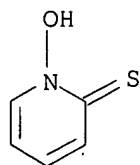
RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 129348-50-1 CAPLUS  
 CN 2-Propyn-1-ol, 3-iodo-, carbamate (9CI) (CA INDEX NAME)



IT 1121-30-8D, Pyrithione, derivs.  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (microbicidal composition containing an s-triazine, a pyrithione metal salt, and  
 an alkylisothiazolinone or halopropynyl carbamate)  
 RN 1121-30-8 CAPLUS  
 CN 2(1H)-Pyridinethione, 1-hydroxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



DOCUMENT NUMBER: 140:359036  
 TITLE: Antifouling coating composition, antifouling coating films, and ships, underwater structures, fishing gear and fishing nets covered therewith  
 INVENTOR(S): Okimoto, Hiroyuki; Mukunoki, Yasuo; Ashida, Toshihiko; Ono, Masashi  
 PATENT ASSIGNEE(S): Chugoku Marine Paints, Ltd., Japan  
 SOURCE: PCT Int. Appl., 71 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

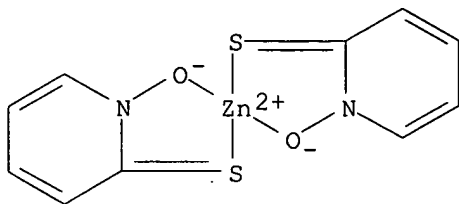
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004037932	A1	20040506	WO 2002-JP13244	20021218
W: CN, IN, JP, KR, NO, SG, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
EP 1457531	A1	20040915	EP 2002-790807	20021218
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR, BG, CZ, EE, SK				
US 2005065232	A1	20050324	US 2004-498821	20040623
PRIORITY APPLN. INFO.: JP 2002-308820 A 20021023				
WO 2002-JP13244 W 20021218				

AB The present invention relates to an antifouling coating composition substantially free from cuprous oxide and organotin containing (A) a metal-containing copolymer obtained by copolymerizing a metal-containing polymerizable unsaturated monomer with a metal-free radical-polymerizable unsaturated monomer, (B) 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one, and (C) a metal pyrithione compound. The invention provides (i) an antifouling coating composition which is reduced in load on the environment and is excellent in antifouling properties, uniformity of coating film depletion, and long-term retention of antifouling properties of the coating film, (ii) antifouling coating films, and (iii) ships, underwater structures, fishing gear and fishing nets, covered with the films. Thus, 44.8% a monomer mixture solution comprising zinc salt of methacrylic acid and acrylic acid 52, Me methacrylate 1, Et acrylate 70.2, and 2-methoxyethyl acrylate 5.4 were polymerized to give a 45.6% copolymer solution, 45 parts of which was mixed with zinc oxide 10, TTK Talc 17, red iron oxide 2, R 5N titanium white 4, AF-Z 2-pyridinethiol-1-oxide zinc salt 3, 30% Sea-Nine 211 4,5-dichloro-2-n-octylisothiazolin-3-one solution 10, Disparlon 4200-10 2, Disparlon A 603-20X 3, xylene 2, and propylene glycol monomethyl ether 2 parts, applied on an anticorrosion coat-treated sand blasting steel plate, and dried to give a test piece with good antifouling to sea water, adhesion, and uniform coating depletion.

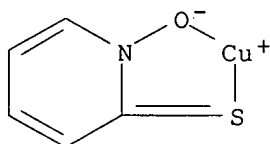
IT 13463-41-7, 2-Pyridinethiol-1-oxide zinc salt  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (AF-Z; antifouling coating compns. for antifouling coating films, ships, underwater structures, fishing gears, and fishing nets)

RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)

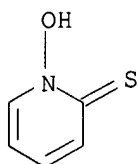




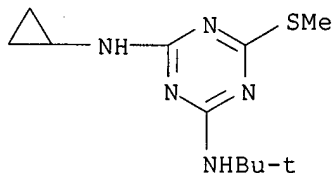
IT 154592-20-8, Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (Copper Pyrithione; antifouling coating compns. for antifouling coating  
 films, ships, underwater structures, fishing gears, and fishing nets)  
 RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



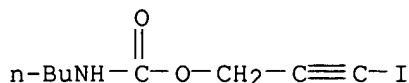
IT 1121-30-8D, Pyrithione, metal derivs. 28159-98-0,  
 Irgarol 1051 55406-53-6, Troysan Polyphase P 100  
 64359-81-5, Sea-Nine 211  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antifouling coating compns. for antifouling coating films, ships,  
 underwater structures, fishing gears, and fishing nets)  
 RN 1121-30-8 CAPLUS  
 CN 2(1H)-Pyridinethione, 1-hydroxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



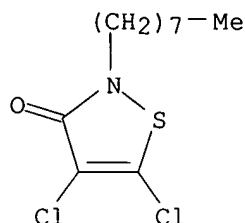
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-  
 (methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)

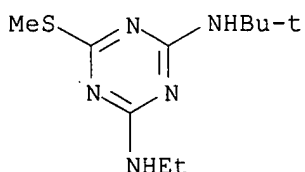


L30 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:2967 CAPLUS  
 DOCUMENT NUMBER: 140:61138  
 TITLE: Coating materials with biocide-containing microcapsules  
 INVENTOR(S): Baum, Ruediger; Antoni-Zimmermann, Dagmar; Wunder, Thomas; Schmidt, Hans-Juergen  
 PATENT ASSIGNEE(S): Thor Gmbh, Germany  
 SOURCE: PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

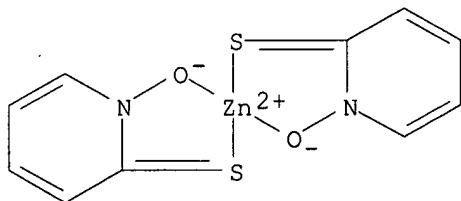
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004000953	A1	20031231	WO 2002-EP6806	20020619
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1519995	A1	20050406	EP 2002-762295	20020619
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004234603	A1	20041125	US 2004-489842	20040315
PRIORITY APPLN. INFO.: WO 2002-EP6806 W 20020619				
AB A coating material for protection against microorganism growth on surfaces exposed to moisture or water has a pH value of at least 11.0 or is provided with a base material having a pH value of at least 11.0, the coating material containing a biocide bonded to solid particles in a carrier material and released in a delayed manner. The coating material can be a plaster having a silicate, mineral or polymer resin binder, or a primer based on a silicate or polymer resin binder. The biocide can be encapsulated into formaldehyde-melamine resin or bonded to solid particles of porous ceramic materials or zeolites. Thus, a plaster having pH 11.5 was produced, the plaster comprising Bu acrylate-styrene copolymer (Acronal 290D), calcium carbonate (Omyacarb 40GU, Omyacarb 130GU) and an				

Al-Mg silicate (Plastorit 05) as binder major components, as well as formaldehyde-melamine resin-encapsulated zinc 2-pyridinethiol-1-oxide biocide. The biocide content in the plaster decreased from 531 ppm to 21 ppm upon exposure to water for 10 days, a plaster containing unencapsulated zinc 2-pyridinethiol-1-oxide had the biocide content decreased from 568 ppm to 2 ppm in 2 days.

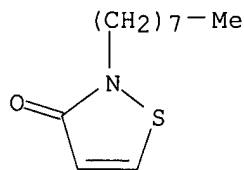
IT 886-50-0 13463-41-7, Zinc 2-pyridinethiol-1-oxide  
 26530-20-1, 2-n-Octylisothiazolin-3-one 55406-53-6,  
 Acticide IPW 50 64359-81-5, 4,5-Dichloro-2-octylisothiazolin-3-one  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (coating materials with biocide-containing microcapsules)  
 RN 886-50-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-  
 (9CI) (CA INDEX NAME)



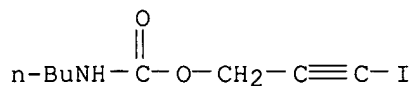
RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
 (9CI) (CA INDEX NAME)



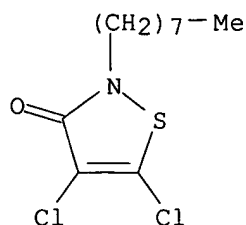
RN 26530-20-1 CAPLUS  
 CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:628053 CAPLUS  
 DOCUMENT NUMBER: 139:151137  
 TITLE: Bactericidal and antifouling coating containing poly(hexamethyleneguanidine) for structure on grounds  
 INVENTOR(S): Someya, Norihisa; Tsudome, Takayuki; Kim, Jin-man; Che, Ki-sung  
 PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; Sk Chemical Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003226846	A2	20030815	JP 2002-64492	20020204

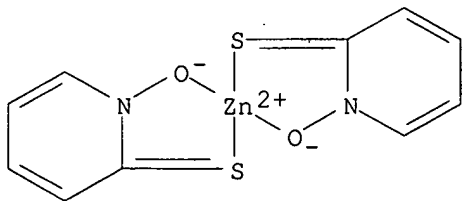
PRIORITY APPLN. INFO.: JP 2002-64492 20020204

AB The coating, used for building walls, kitchen walls, etc., contains poly(hexamethyleneguanidine) phosphate (I). Alternatively, the coating contains poly(hexamethyleneguanidine) salts with inorg. acids, e.g., HCl, H2SO4, HNO3, etc., or organic acids, e.g., carboxylic acids, etc. Thus, a mixture of I 8.0, an acrylic resin emulsion 40.0, and water 52.0 parts was applied on a wood test piece, which was subjected to accelerated weathering test for 500 h to show retention of adhesive strength and no discoloration on the surface.

IT 13463-41-7 14915-37-8 26530-20-1,  
 2-Octyl-4-isothiazolin-3-one 28159-98-0 55406-53-6,  
 3-Iodo-2-propynylbutyl carbamate 64359-81-5,  
 4,5-Dichloro-2-octyl-4-isothiazolin-3-one  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (in bactericidal antifouling coating containing poly(hexamethyleneguanidine) salt for structure on grounds)

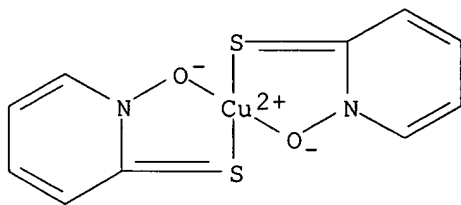
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)

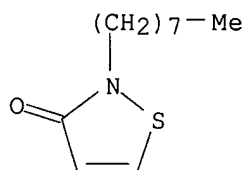


RN 14915-37-8 CAPLUS  
 CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)

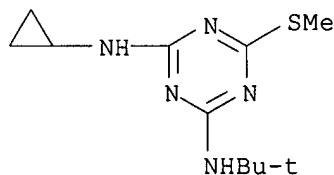
(CA INDEX NAME)



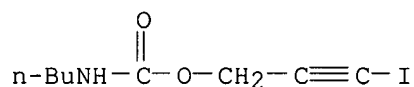
RN 26530-20-1 CAPLUS  
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



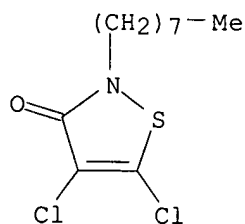
RN 28159-98-0 CAPLUS  
CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L30 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:628052 CAPLUS  
DOCUMENT NUMBER: 139:151136  
TITLE: Antifouling coating containing

INVENTOR(S): poly(hexamethyleneguanidine) salt  
Someya, Norio; Tsuru, Takayuki; Kim, Jin-man; Che,  
Ki-sun  
PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; Sk  
Chemical Ltd.  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003226845	A2	20030815	JP 2002-64491	20020204

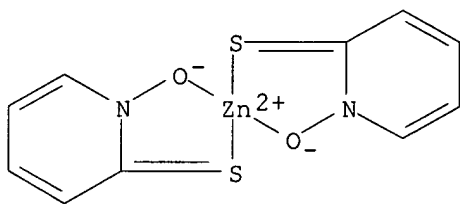
PRIORITY APPLN. INFO.: JP 2002-64491 20020204

AB The marine antifouling coating, which is used for fish nets, ship, and marine structures, contains poly(hexamethyleneguanidine) phosphate (I). Alternatively, the antifouling coating contains poly(hexamethyleneguanidine) salts with inorg. acids, e.g., HCl, H<sub>2</sub>SO<sub>4</sub>, HNO<sub>3</sub>, etc., or organic acids, e.g., carboxylic acids, etc., which is used as bactericidal coatings on structures on grounds. Thus, a polyethylene fish net was impregnated with a mixture of I 10.0, an acrylic resin emulsion 40.0, and water 50.0 parts then soaked in seawater for 6 mo to show antifouling effect.

IT **13463-41-7 14915-37-8 26530-20-1,**  
2-Octyl-4-isothiazolin-3-one **28159-98-0 55406-53-6,**  
3-Iodo-2-propynylbutyl carbamate **64359-81-5,**  
4,5-Dichloro-2-octyl-4-isothiazolin-3-one  
RL: MOA (Modifier or additive use); USES (Uses)  
(in marine antifouling coating containing poly(hexamethyleneguanidine) phosphate)

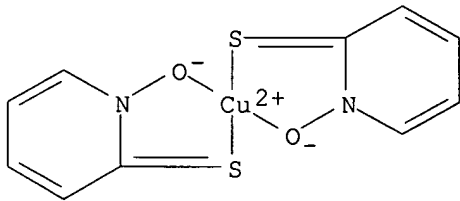
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS<sub>2</sub>]-, (T-4)-  
(9CI) (CA INDEX NAME)



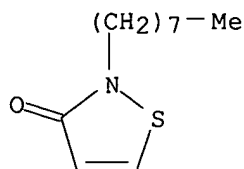
RN 14915-37-8 CAPLUS

CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS<sub>2</sub>]- (9CI)  
(CA INDEX NAME)

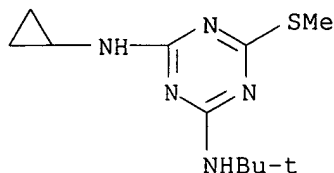


RN 26530-20-1 CAPLUS

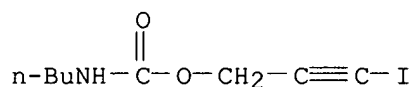
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



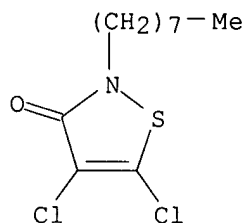
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L30 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:582364 CAPLUS  
 DOCUMENT NUMBER: 139:129406  
 TITLE: Synergistic antimicrobial agents containing quaternary ammonium salts  
 INVENTOR(S): Kubota, Takao; Tanaka, Shoji; Matsuhisa, Shigeyoshi  
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003212706	A2	20030730	JP 2002-331715	20021115
PRIORITY APPLN. INFO.:			JP 2001-353771	A 20011119
OTHER SOURCE(S):	MARPAT 139:129406			

AB The agents for control of bacteria, fungi, yeast, and algae, contain bis(quaternary ammonium) salts and  $\geq 1$  compound selected from isothiazolines, nitro alcs., dithiols, thiophenes, haloacetylenes, phthalimides, haloalkylthio compds., pyrithiones, phenylureas, triazines, guanidines, triazoles, and benzimidazoles. Concomitant addition of Dibnirol A 75 (2,2-dibromo-2-nitro-1-ethanol; DBNE) and Dimer 38 [N,N'-hexamethylenebis(4-carbamoyl-1-decylpyridiniumbromide); HMDP-Br] showed synergistic antimicrobial effects in a mixed culture containing *Serratia marcescens*, *Escherichia coli*, and *Pseudomonas aeruginosa* with min. inhibitory concns. of 3 ppm for DBNE and 0.2 ppm for HMDP-Br.

IT 501940-47-2 501940-49-4 501940-55-2  
568583-81-3 568583-83-5 568583-88-0  
569370-97-4  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(synergistic industrial microbicides containing bis(quaternary ammonium) salts)

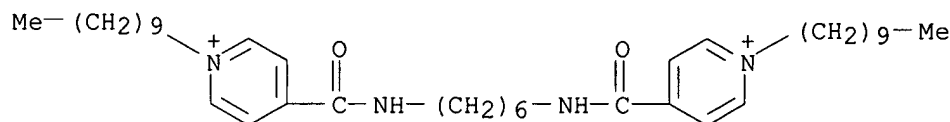
RN 501940-47-2 CAPLUS

CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-, dibromide, mixt. with 2-octyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

CRN 190513-77-0

CMF C38 H64 N4 O2 . 2 Br

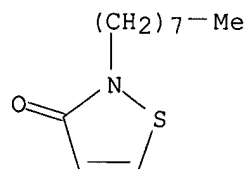


● 2 Br<sup>-</sup>

CM 2

CRN 26530-20-1

CMF C11 H19 N O S



RN 501940-49-4 CAPLUS

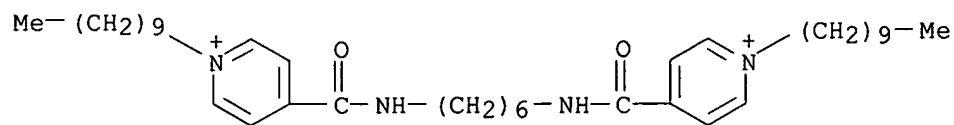
CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-, dibromide, mixt. with (T-4)-bis[1-(hydroxy- $\kappa$ O)-2(1H)-pyridinethionato- $\kappa$ S2]zinc (9CI) (CA INDEX NAME)

CM 1

CRN 190513-77-0

CMF C38 H64 N4 O2 . 2 Br





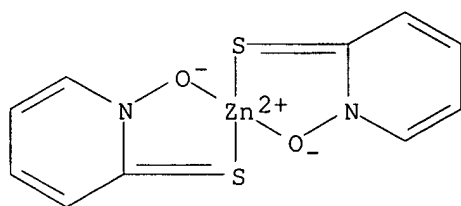
● 2 Br<sup>-</sup>

CM 2

CRN 13463-41-7

CMF C10 H8 N2 O2 S2 Zn

CCI CCS



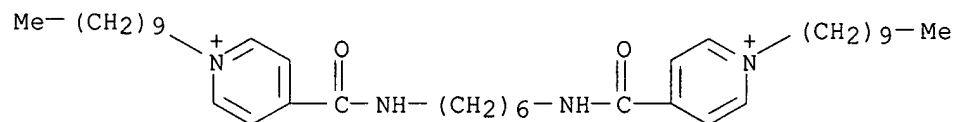
RN 501940-55-2 CAPLUS

CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-,  
dibromide, mixt. with 2-methyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

CRN 190513-77-0

CMF C38 H64 N4 O2 . 2 Br

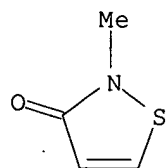


● 2 Br<sup>-</sup>

CM 2

CRN 2682-20-4

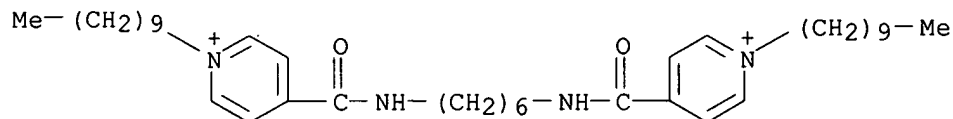
CMF C4 H5 N O S



RN 568583-81-3 CAPLUS  
 CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-,  
 dibromide, mixt. with N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)-  
 1,3,5-triazine-2,4-diamine (9CI) (CA INDEX NAME)

CM 1

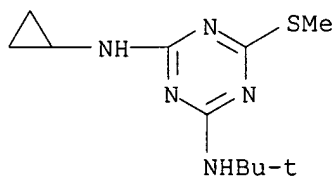
CRN 190513-77-0  
 CMF C38 H64 N4 O2 . 2 Br



● 2 Br<sup>-</sup>

CM 2

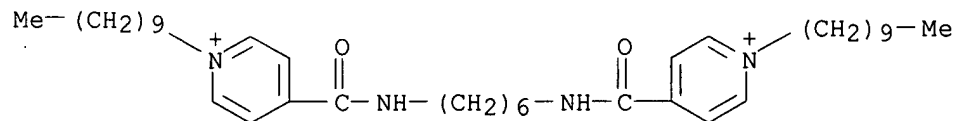
CRN 28159-98-0  
 CMF C11 H19 N5 S



RN 568583-83-5 CAPLUS  
 CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-,  
 dibromide, mixt. with 3-iodo-2-propynyl butylcarbamate (9CI) (CA INDEX  
 NAME)

CM 1

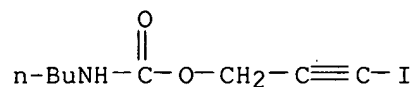
CRN 190513-77-0  
 CMF C38 H64 N4 O2 . 2 Br



● 2 Br<sup>-</sup>

CM 2

CRN 55406-53-6  
 CMF C8 H12 I N O2



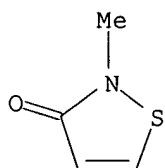
RN 568583-88-0 CAPLUS

CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-, diacetate, mixt. with 2-methyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

CRN 2682-20-4

CMF C4 H5 N O S



CM 2

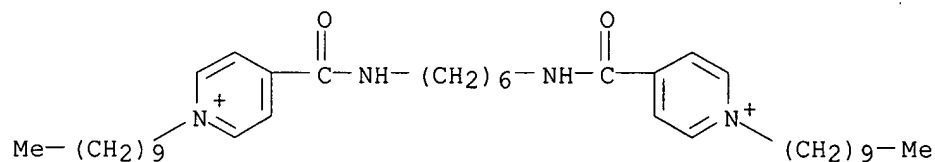
CRN 265996-50-7

CMF C38 H64 N4 O2 . 2 C2 H3 O2

CM 3

CRN 50569-15-8

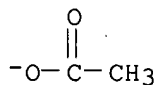
CMF C38 H64 N4 O2



CM 4

CRN 71-50-1

CMF C2 H3 O2

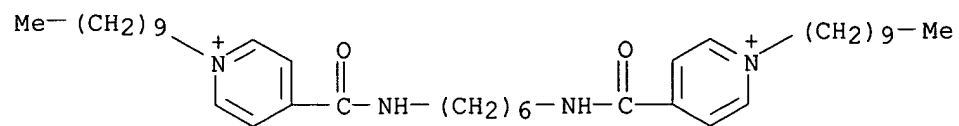


RN 569370-97-4 CAPLUS

CN Pyridinium, 4,4'-[1,6-hexanediylbis(iminocarbonyl)]bis[1-decyl-, dibromide, mixt. with 5-chloro-2-methyl-3(2H)-isothiazolone, 4,5-dichloro-3H-1,2-dithiol-3-one, N,4-dihydroxy- $\alpha$ -oxobenzeneethanimidoyl chloride and 2-methyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

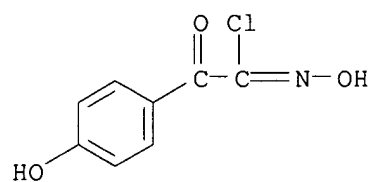
CRN 190513-77-0  
 CMF C38 H64 N4 O2 . 2 Br



● 2 Br<sup>-</sup>

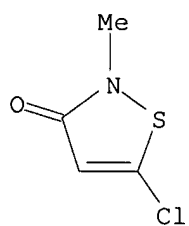
CM 2

CRN 34911-46-1  
 CMF C8 H6 Cl N O3



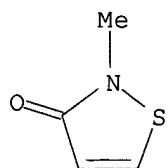
CM 3

CRN 26172-55-4  
 CMF C4 H4 Cl N O S



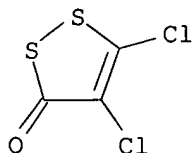
CM 4

CRN 2682-20-4  
 CMF C4 H5 N O S

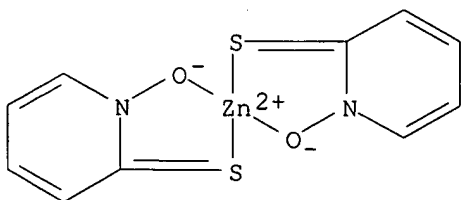


CM 5

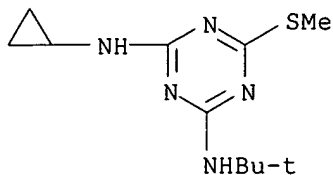
CRN 1192-52-5  
CMF C3 C12 O S2



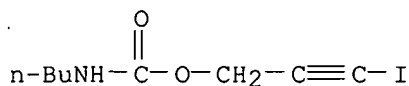
L30 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2001:706210 CAPLUS  
DOCUMENT NUMBER: 135:340403  
TITLE: The environmental fate and behaviour of antifouling paint booster biocides: A review  
AUTHOR(S): Thomas, K. V.  
CORPORATE SOURCE: Centre for Environment, Fisheries and Aquaculture Science, CEFAS Burnham Laboratory, Burnham on Crouch, CM0 8HA, UK  
SOURCE: Biofouling (2001), 17(1), 73-86  
CODEN: BFOUEC; ISSN: 0892-7014  
PUBLISHER: Harwood Academic Publishers  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: English  
AB A review with refs. Antifouling paint booster biocides are a group of organic compds. added to antifouling paints to improve their efficacy. They have become prevalent since the requirement for alternative antifouling paints formulations for small boats (<25m). This need followed a ban on the use of triorganotin biocides in antifouling paints for small boats, in the late 1980's. Worldwide, around eighteen compds. are currently used as antifouling biocides, viz. benzmethylanide, chlorothalonil, copper pyrithione, dichlofluanid, diuron, fluorofolpet, Irgarol 1051, Sea-Nine 211, Mancozeb, Polyphase, pyridine-triphenylborane, TCMS (2,3,5,6-tetrachloro-4-methylsulfonyl pyridine), TCMTB [2-(thiocyanomethylthio)benzothiazole], Thiram, tolylfluanid, zinc pyrithione (ZPT), ziram and Zineb. Any booster biocide released into the environment is subjected to a complex set of processes. These processes include transport mechanisms, transformation, degradation, cross media partitioning, and bioaccumulation. This paper reviews the fate and behavior data currently available in the public domain concerning antifouling paint booster biocides.  
IT 13463-41-7, Zinc pyrithione 28159-98-0, Irgarol 1051  
55406-53-6, Polyphase 64359-81-5, Sea-Nine 211  
154592-20-8, Copper pyrithione  
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(environmental fate and behavior of antifouling paint booster biocides)  
RN 13463-41-7 CAPLUS  
CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



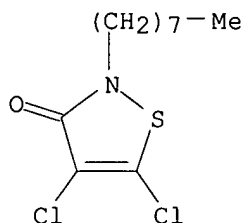
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



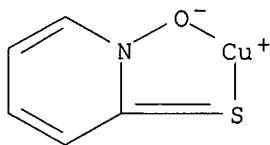
RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 154592-20-8 CAPLUS  
 CN Copper, [1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:578597 CAPLUS  
 DOCUMENT NUMBER: 135:124156  
 TITLE: Bactericide combinations in detergents  
 INVENTOR(S): Elsmore, Richard; Houghton, Mark Phillip  
 PATENT ASSIGNEE(S): Robert McBride Ltd., UK  
 SOURCE: Brit. UK Pat. Appl., 53 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

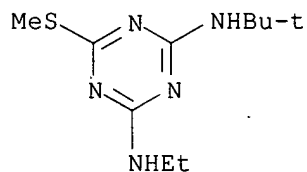
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2354771	A1	20010404	GB 1999-23253	19991001
PRIORITY APPLN. INFO.:			GB 1999-23253	19991001

AB The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Creduret 50 (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5, detergent enzyme savingase 0.2, and bactericide Pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing reduction activity after contact 2.

IT 886-50-0 1121-30-8 1121-31-9 2682-20-4  
3696-28-4 3811-73-2 4299-07-4  
7287-19-6 13463-41-7 14915-37-8  
22936-75-0 26172-55-4 26530-03-0  
26530-20-1 28159-98-0 43143-11-9  
55406-53-6 55965-84-9 64359-81-5  
82633-79-2  
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);  
BIOL (Biological study); USES (Uses)  
(bactericide combinations in detergents)

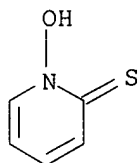
RN 886-50-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-(1,1-dimethylethyl)-N'-ethyl-6-(methylthio)-  
(9CI) (CA INDEX NAME)



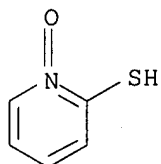
RN 1121-30-8 CAPLUS

CN 2(1H)-Pyridinethione, 1-hydroxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



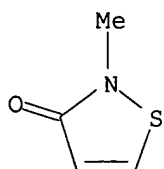
RN 1121-31-9 CAPLUS

CN 2-Pyridinethiol, 1-oxide (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

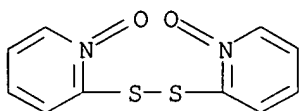


RN 2682-20-4 CAPLUS

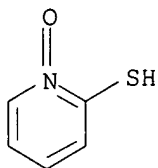
CN 3(2H)-Isothiazolone, 2-methyl- (9CI) (CA INDEX NAME)



RN 3696-28-4 CAPLUS  
CN Pyridine, 2,2'-dithiobis-, 1,1'-dioxide (9CI) (CA INDEX NAME)

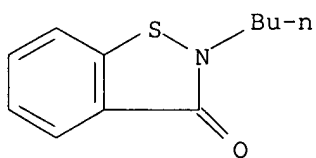


RN 3811-73-2 CAPLUS  
CN 2-Pyridinethiol, 1-oxide, sodium salt (8CI, 9CI) (CA INDEX NAME)

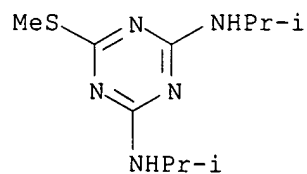


● Na

RN 4299-07-4 CAPLUS  
CN 1,2-Benzisothiazol-3(2H)-one, 2-butyl- (9CI) (CA INDEX NAME)

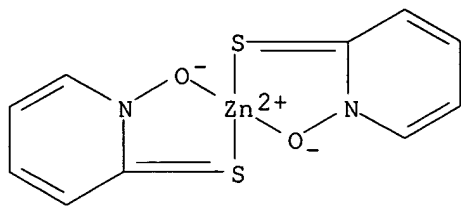


RN 7287-19-6 CAPLUS  
CN 1,3,5-Triazine-2,4-diamine, N,N'-bis(1-methylethyl)-6-(methylthio)- (9CI)  
(CA INDEX NAME)

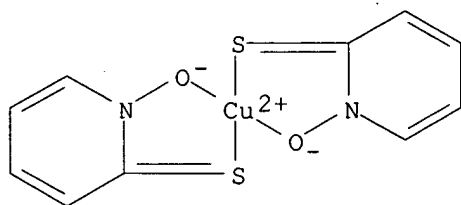


RN 13463-41-7 CAPLUS  
CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-  
(9CI) (CA INDEX NAME)

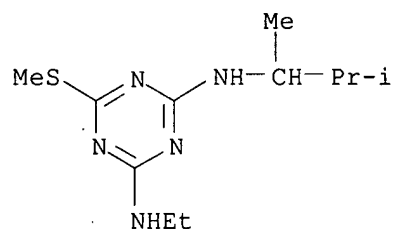




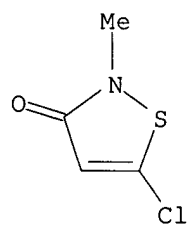
RN 14915-37-8 CAPLUS  
 CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



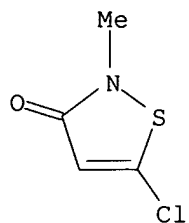
RN 22936-75-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-(1,2-dimethylpropyl)-N'-ethyl-6-(methylthio)-  
 (9CI) (CA INDEX NAME)



RN 26172-55-4 CAPLUS  
 CN 3(2H)-Isothiazolone, 5-chloro-2-methyl- (9CI) (CA INDEX NAME)

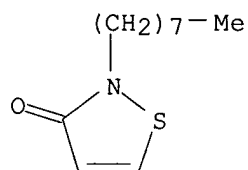


RN 26530-03-0 CAPLUS  
 CN 3(2H)-Isothiazolone, 5-chloro-2-methyl-, hydrochloride (9CI) (CA INDEX  
 NAME)

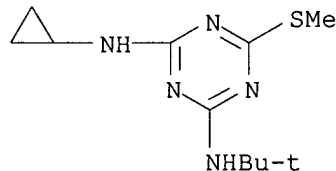


● HCl

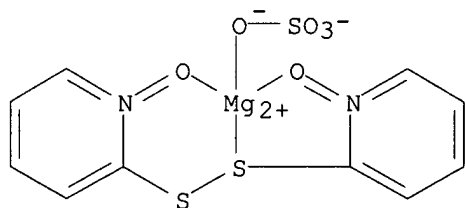
RN 26530-20-1 CAPLUS  
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



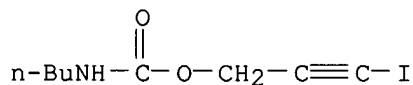
RN 28159-98-0 CAPLUS  
CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 43143-11-9 CAPLUS  
CN Magnesium, [2,2'-(dithio-κS)bis[pyridine] 1,1'-di(oxide-κO)][sulfato(2-)-κO]-, (T-4)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



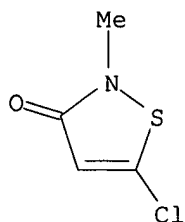
RN 55965-84-9 CAPLUS

CN 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

CRN 26172-55-4

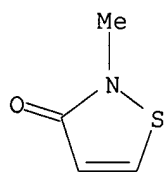
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CM 2

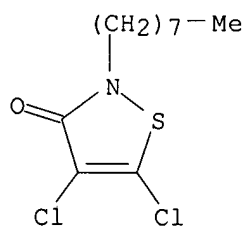
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CMF C4 H5 N O S



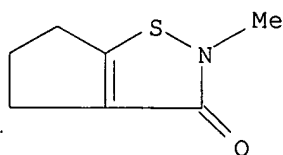
RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



RN 82633-79-2 CAPLUS

CN 2H-Cyclopent[d]isothiazol-3(4H)-one, 5,6-dihydro-2-methyl- (9CI) (CA INDEX NAME)



L30 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:725406 CAPLUS

DOCUMENT NUMBER: 133:262648

TITLE: Microbicidal composition for coatings  
 INVENTOR(S): Lindner, Wolfgang  
 PATENT ASSIGNEE(S): Troy Chemie G.m.b.H., Germany  
 SOURCE: PCT Int. Appl., 36 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000059305	A1	20001012	WO 2000-EP2823	20000330
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

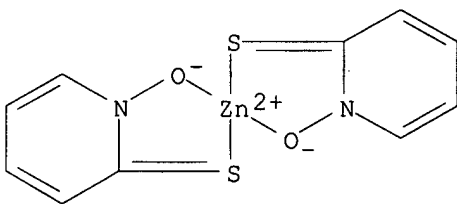
PRIORITY APPLN. INFO.: DE 1999-19915055 A 19990401

AB The invention relates to a microbicidal composition which comprises: (a) 2-methoxycarbonylaminobenzimidazole or thiabendazole; (b) octylisothiazolin-3-one or 3-iodopropynyloxy N-butylcarbamate; (c) 2-mercaptopyridine N-oxide zinc salt; and (d) an N-aryl-N',N'-dimethylurea derivative or a chlorine-free triazine derivative from the class of 2-methylmercaptodialkylamino-sym-triazines. The invention also relates to coatings containing the above compns, such as for roofs and walls.

IT **13463-41-7D**, mixts. containing **26530-20-1D**, mixts. containing **55406-53-6D**, mixts. containing **298197-38-3**  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (microbicidal coating composition)

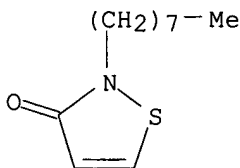
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



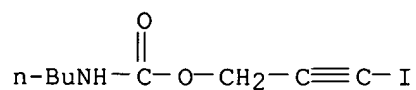
RN 26530-20-1 CAPLUS

CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS

CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



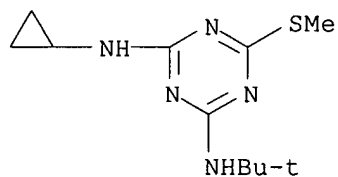
RN 298197-38-3 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-, mixt. with N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)-1,3,5-triazine-2,4-diamine, methyl 1H-benzimidazol-2-ylcarbamate and 2-octyl-3(2H)-isothiazolone (9CI) (CA INDEX NAME)

CM 1

CRN 28159-98-0

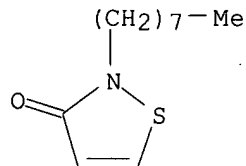
CMF C11 H19 N5 S



CM 2

CRN 26530-20-1

CMF C11 H19 N O S

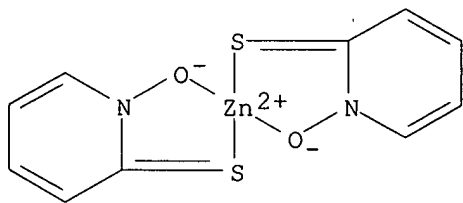


CM 3

CRN 13463-41-7

CMF C10 H8 N2 O2 S2 Zn

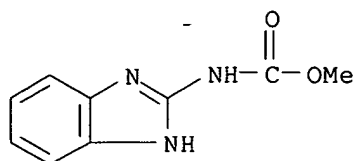
CCI CCS



CM 4

CRN 10605-21-7

CMF C9 H9 N3 O2



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:392945 CAPLUS  
 DOCUMENT NUMBER: 131:40955  
 TITLE: Controlled-release compositions containing agricultural pesticide, microbicide or antifouling agent incorporated into metal oxide glass  
 INVENTOR(S): Ghosh, Tirthankar; Nungesser, Edwin Hugh  
 PATENT ASSIGNEE(S): Rohm and Haas Company, USA  
 SOURCE: Eur. Pat. Appl., 18 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 922386	A2	19990616	EP 1998-309692	19981125
EP 922386	A3	20000126		
EP 922386	B1	20040204		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6090399	A	20000718	US 1998-189479	19981110
AU 9895159	A1	19990701	AU 1998-95159	19981201
AU 761076	B2	20030529		
SG 71879	A1	20000418	SG 1998-5360	19981208
BR 9805326	A	20000314	BR 1998-5326	19981209
JP 11263702	A2	19990928	JP 1998-352346	19981211
CN 1232610	A	19991027	CN 1998-123093	19981211
PRIORITY APPLN. INFO.:			US 1997-69243P	P 19971211

AB Disclosed are controlled-release compns. containing biol. active compds. incorporated into metal oxide glass having a porous matrix which is prepared by polymerizing one or more metal alkoxide monomers, optionally in the presence of a second metal alkoxide monomer. These compns. may be directly incorporated into the locus to be protected or may be applied to a structure in a coating. Thus, tetraethoxy orthosilicate and methyltriethoxy orthosilicate (mole ratio 4:1), 4,5-dichloro-2-n-octyl-3-isothiazolone (5% by weight of the final product), and water (mole ratio of alkoxide monomers to water 1:2) were combined in a flask and homogenized by adding methanol or ethanol while stirring; then, 8-10 g of 0.01N HCl per mol of metal alkoxide monomer was added to the reaction mixture, which was allowed to polymerize at room temperature for 3-60 days to give a solid organometallic oxide glass containing the biol. active compound. The cumulative percentages of 4,5-dichloro-2-n-octyl-3-isothiazolone released were 5, 30, 41, 50 and 64% by weight in 0, 0.5, 2, 31, and 144 h.

IT **13463-41-7**, Zinc 2-pyridinethiol-1-oxide **26530-20-1**, 2-n-Octyl-3-isothiazolone **82633-79-2**

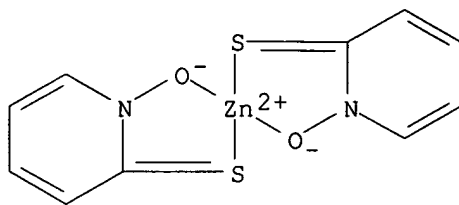
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(controlled-release compns. containing agricultural pesticide, microbicide or antifouling agent incorporated into metal oxide glass)

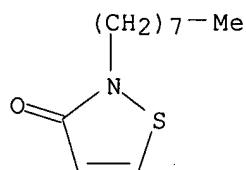
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-

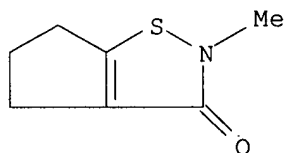
(9CI) (CA INDEX NAME)



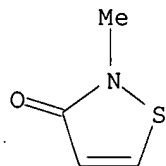
RN 26530-20-1 CAPLUS  
CN 3(2H)-Isothiazolone, 2-octyl- (9CI) (CA INDEX NAME)



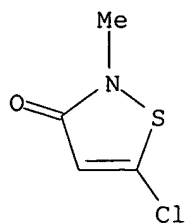
RN 82633-79-2 CAPLUS  
CN 2H-Cyclopent[d]isothiazol-3(4H)-one, 5,6-dihydro-2-methyl- (9CI) (CA INDEX NAME)



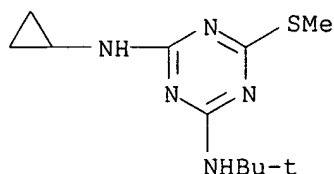
IT 2682-20-4, 2-Methyl-3-isothiazolone 26172-55-4  
28159-98-0, 2-(Methylthio)-4-tert-butylamino-6-(cyclopropylamino)-  
s-triazine 55406-53-6, 3-Iodo-2-propynyl butyl carbamate  
64359-81-5, 4,5-Dichloro-2-n-octyl-3-isothiazolone  
RL: BUU (Biological use, unclassified); PEP (Physical, engineering or  
chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(controlled-release compns. containing agricultural pesticide, microbicide  
or antifouling agent incorporated into metal oxide glass)  
RN 2682-20-4 CAPLUS  
CN 3(2H)-Isothiazolone, 2-methyl- (9CI) (CA INDEX NAME)



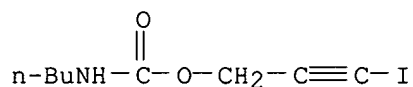
RN 26172-55-4 CAPLUS  
CN 3(2H)-Isothiazolone, 5-chloro-2-methyl- (9CI) (CA INDEX NAME)



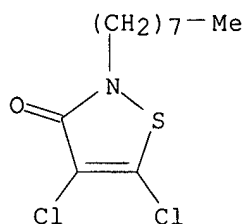
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)



L30 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:21532 CAPLUS  
 DOCUMENT NUMBER: 130:82915  
 TITLE: Diphenyldiones as marine antifouling agents  
 INVENTOR(S): Willingham, Gary Lewis; Oltman, Linda Marguerite  
 PATENT ASSIGNEE(S): Rohm and Haas Company, USA  
 SOURCE: U.S., 5 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5853463	A	19981229	US 1998-108767	19980701
PRIORITY APPLN. INFO.:			US 1998-108767	19980701



OTHER SOURCE(S): MARPAT 130:82915

AB Method of inhibiting the growth of marine organisms on a marine structure, by applying onto or into the marine structure with diphenyldiones  $\text{RC}_6\text{H}_4\text{COCOC}_6\text{H}_4\text{R}_1$  ( $\text{R} < \text{R}_1 = \text{H}$ , C1-20 alkyl and halo C1-20 alkyl). These diphenyldiones may be used in conjunction with other antifouling agents and have little or no harmful effects on marine environments. These compds. may be directly incorporated into the marine structure during manufacture, directly applied to the structure, or applied to the structure by means of a coating.

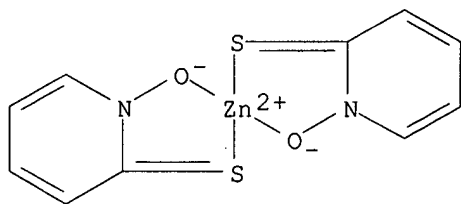
IT **13463-41-7**, Zinc 2-pyridinethiol-1-oxide **28159-98-0**,  
2-Methylthio-4-tert-butylamino-6-cyclopropylamino-s-triazine  
**55406-53-6**, 3-Iodo-2-propynylbutyl carbamate **64359-81-5**,  
4,5-Dichloro-2-n-octyl-3-isothiazolone

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)

(marine antifouling agent compns. containing; diphenyldiones as marine antifouling agents having little or no harmful effects on marine environments.)

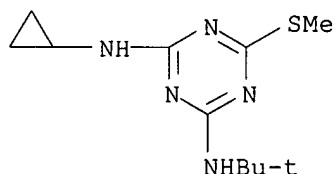
RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy- $\kappa\text{O}$ )-2(1H)-pyridinethionato- $\kappa\text{S}_2$ ]-, (T-4)-  
(9CI) (CA INDEX NAME)



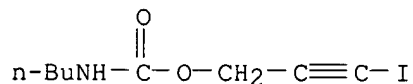
RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



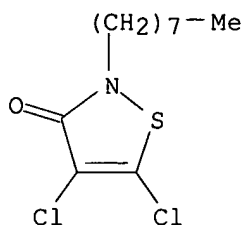
RN 55406-53-6 CAPLUS

CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS

CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)

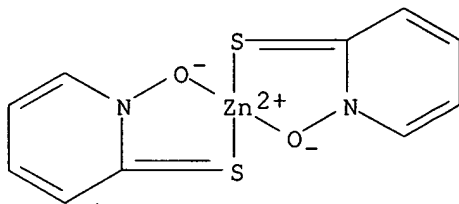


REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

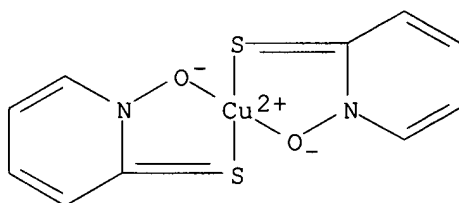
L30 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1998:543098 CAPLUS  
 DOCUMENT NUMBER: 129:176163  
 TITLE: Triphenylboron-containing polymers and their use as marine antifouling agents  
 INVENTOR(S): Shimada, Akira; Kohara, Masanori; Shibuya, Yoshifumi  
 PATENT ASSIGNEE(S): Yoshitomi Fine Chemicals, Ltd., Japan  
 SOURCE: PCT Int. Appl., 45 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9833829	A1	19980806	WO 1998-JP375	19980128
W: CN, JP, KR, NO, SG, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 2002161115	A2	20020604	JP 1997-259897	19970925
PRIORITY APPLN. INFO.:			JP 1997-16694	A 19970130
			JP 1997-259897	A 19970925

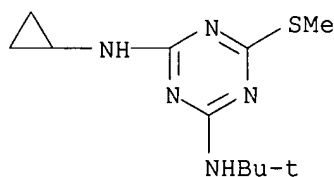
OTHER SOURCE(S): MARPAT 129:176163  
 AB Title polymers have repeating units of CR2R3CR1CH2NH2BPh3 or CH2CHNH2BPh3 (R1, R2, R3 = H or C1-4 alkyl) and weight-average mol. weight of 1,000-1,000,000, and are useful as antifouling agents for aquatic foulings. The polymers function not only as the active ingredients but as binders, and have less influence on the environment. Thus, an antifouling agent composition comprising poly(allylamine)-triphenylboron complex (preparation given) 5, acrylic resin 30, and xylene 65% was applied on Tetron (polyester) fish net, which was kept in seawater for 4 mo giving no biofouling.  
 IT 13463-41-7, Bis(2-pyridinethiol 1-oxide)zinc 14915-37-8, Bis(2-pyridinethiol 1-oxide)copper 28159-98-0, 2-(tert-Butylamino)-4-(cyclopropylamino)-6-(methylthio)-1,3,5-triazine 55406-53-6, 3-Iodo-2-propynyl butylcarbamate 64359-81-5, 4,5-Dichloro-2-n-octyl-3-isothiazolone  
 RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)  
 (addnl. antifouling agent; preparation of triphenylboron-containing polymers for marine antifouling agents)  
 RN 13463-41-7 CAPLUS  
 CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



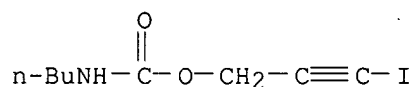
RN 14915-37-8 CAPLUS  
 CN Copper, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]- (9CI)  
 (CA INDEX NAME)



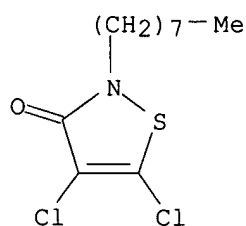
RN 28159-98-0 CAPLUS  
 CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)



RN 55406-53-6 CAPLUS  
 CN Carbamic acid, butyl-, 3-iodo-2-propynyl ester (9CI) (CA INDEX NAME)



RN 64359-81-5 CAPLUS  
 CN 3(2H)-Isothiazolone, 4,5-dichloro-2-octyl- (9CI) (CA INDEX NAME)

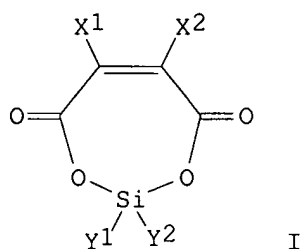


REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1993:562559 CAPLUS

DOCUMENT NUMBER: 119:162559  
 TITLE: Antifouling coating compositions  
 INVENTOR(S): Masuoka, Shigeru; Ito, Masayasu; Pponda, Yoshihiro  
 PATENT ASSIGNEE(S): Nippon Oils & Fats Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05112739	A2	19930507	JP 1991-299887	19911018
PRIORITY APPLN. INFO.: GI			JP 1991-299887	19911018

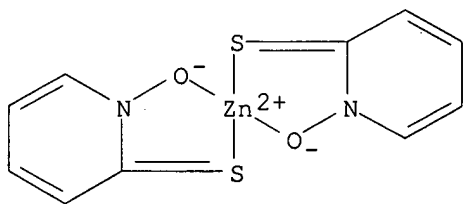


AB Title comps. contain I (co)polymers and/or I-vinyl monomer copolymers and stain-preventing agents [X1-2 = H, Me; Y1-2 = normal alkyl, branched alkyl, cyclic alkyl, alkoxy, (un)substituted Ph, (un)substituted PhO]. Thus, 60 parts I (X1-2 = H, Y1-2 = C4H9) and 40 parts vinyl acetate were polymerized to give a polymer solution, 24 parts of which was mixed with 30 parts Cu2O and 10 parts phenyl(bispyridine)bismuth dichloride to give a composition with good antifouling property.

IT **13463-41-7**, 2-Pyridinethiol-1-oxide zinc salt **28159-98-0**  
**55406-53-6**, 3-Iodo-2-propynylbutylcarbamate **64359-81-5**  
 RL: USES (Uses)  
 (antifouling agents, diorganosilyl-having polymer coatings containing)

RN 13463-41-7 CAPLUS

CN Zinc, bis[1-(hydroxy-κO)-2(1H)-pyridinethionato-κS2]-, (T-4)-(9CI) (CA INDEX NAME)



RN 28159-98-0 CAPLUS

CN 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio)- (9CI) (CA INDEX NAME)